

Long-Term Trash Load Reduction Plan and Assessment Strategy

Submitted by:



City of Half Moon Bay
501 Main Street
Half Moon Bay, CA 94019

In compliance with Provisions C.10.c of Order R2-2009-0074

January 24, 2013

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CITY OF HALF MOON BAY
LONG-TERM TRASH LOAD REDUCTION PLAN AND
ASSESSMENT STRATEGY

CERTIFICATION STATEMENT

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature by Duly Authorized Representative:

Mo Sharma

1-31-2014

Mo Sharma
City Engineer

Date

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ABBREVIATIONS

BASMAA	Bay Area Stormwater Management Agencies Association
BID	Business Improvement District
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CASQA	California Stormwater Quality Association
CDS	Continuous Deflection Separator
CEQA	California Environmental Quality Act
CY	Cubic Yards
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
GIS	Geographic Information System
MRP	Municipal Regional Stormwater NPDES Permit
MS4	Municipal Separate Storm Sewer System
NGO	Non-Governmental Organization
NPDES	National Pollutant Discharge Elimination System
Q	Flow
SFRWQCB	San Francisco Regional Water Quality Control Board
SWRCB	State Water Resource Control Board
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
Water Board	San Francisco Regional Water Quality Control Board
WDR	Waste Discharge Requirements

PREFACE

This Long-Term Trash Load Reduction Plan and Assessment Strategy (Long-Term Plan) is submitted in compliance with provision C.10.c of the Municipal Regional Stormwater NPDES Permit (MRP) for Phase I communities in the San Francisco Bay (Order R2-2009-0074). The Long-Term Plan was developed using a regionally consistent outline and guidance developed by the Bay Area Stormwater Management Agencies Association (BASMAA) and reviewed by San Francisco Bay Regional Water Quality Control Board staff. The Long-Term Plan is consistent with the Long-Term Trash Load Reduction Framework developed in collaboration with Water Board staff. Its content is based on the City of Half Moon Bay's current understanding of trash problems within its jurisdiction and the effectiveness of control measures designed to reduce trash impacts associated with Municipal Separate Storm Sewer (MS4) discharges. This Long-Term Plan is intended to be iterative and may be modified in the future based on information gained through the implementation of trash control measures. The City of Half Moon Bay therefore reserves the right to revise or amend this Long-Term Plan at its discretion. If significant revisions or amendments are made by the City, a revised Long-Term Plan will be submitted to the Water Board through the City's annual reporting process.

1.0 INTRODUCTION

1.1 Purpose of Long-Term Trash Reduction Plan

The Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit for Phase I communities in the San Francisco Bay (Order R2-2009-0074), also known as the Municipal Regional Permit (MRP), became effective on December 1, 2009. The MRP applies to 76 large, medium and small municipalities (cities, towns and counties) and flood control agencies in the San Francisco Bay Region, collectively referred to as Permittees. Provision C.10.c of the MRP requires Permittees to submit a *Long-Term Trash Load Reduction Plan* (Long-Term Plan) by February 1, 2014. Long-Term Plans must describe control measures that are currently being implemented, including the level of implementation, and additional control measures that will be implemented and/or increased level of implementation designed to attain a 70% trash load reduction by July 1, 2017, and 100% (i.e., “No Visual Impact”) by July 1, 2022.

This Long-Term Plan is submitted by the City of Half Moon Bay in compliance with MRP provision C.10.c. Consistent with provision C.10 requirements, the goal of the Long-Term Plan is to solve trash problems in receiving waters by reducing the impacts associated with trash in discharges from the City of Half Moon Bay’s municipal separate storm sewer system (MS4) that are regulated by NPDES Permit requirements. The Long-Term Plan includes:

1. Descriptions the current level of implementation of trash control measures, and the type and extent to which new or enhanced control measures will be implemented to achieve a target of 100% (i.e. full) trash reduction from MS4s by July 1, 2022, with an interim milestone of 70% reduction by July 1, 2017;
2. A description of the *Trash Assessment Strategy* that will be used assess progress towards trash reduction targets achieved as a result of control measure implementation; and,
3. Time schedules for implementing control measures and the assessment strategy.

The Long-Term Plan was developed using a regionally consistent outline and guidance developed by the Bay Area Stormwater Management Agencies Association (BASMAA) and reviewed by the San Francisco Bay Regional Water Quality Control Board (Water Board) staff. The Long-Term Plan is consistent with the Long-Term Trash Load Reduction Framework (see section 1.2.1) developed in collaboration with Water Board staff. Its content is based on the City of Half Moon Bay’s current understanding of trash problems within its jurisdiction and the effectiveness of control measures designed to reduce trash impacts associated with Municipal Separate Storm Sewer (MS4) discharges. The Long-Term Plan builds upon trash control measures implemented by the City prior to the adoption of the MRP and during the implementation of the Short-Term Trash Load Reduction Plan submitted to the Water Board on February 1, 2012.

1.2 Background

1.2.1 Long-Term Trash Load Reduction Plan Framework

A workgroup of MRP Permittee, Bay Area countywide stormwater program staff and Water Board staff met between October 2012 and March 2013 to better define the process for developing and implementing Long-Term Plans, methods for assessing progress toward reduction goals, and tracking and reporting requirements associated with provision C.10. Through these discussions, an eight-step framework for developing and implementing Long-Term Plans was created by the workgroup (Figure 1).

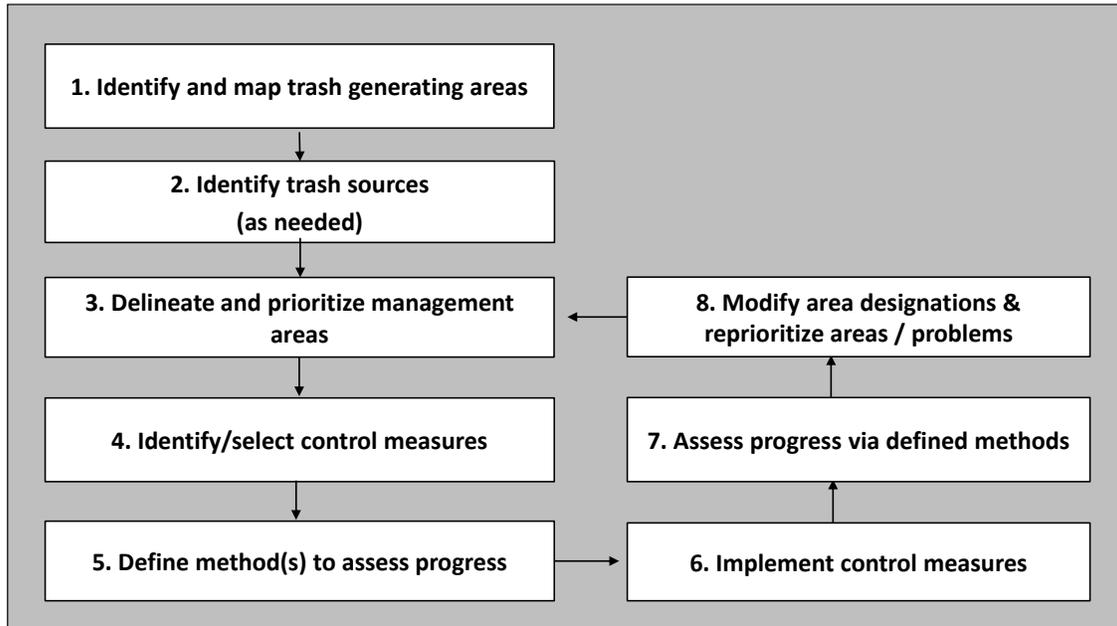


Figure 1. Eight-step framework for developing, implementing and refining Long-Term Trash Reduction Plans.

The workgroup agreed that as the first step in the framework, Permittees would identify very high, high, moderate, and low trash generating areas in their jurisdictional areas. Trash generation rates developed through the *BASMAA Baseline Trash Generation Rates Project* (as discussed below) were used as a starting point for differentiating and delineating land areas with varying levels of trash generation. Permittees would then use local knowledge and field and/or desktop assessments to confirm or refine the level of trash generation for specific areas within their jurisdiction. Each Permittee would then develop a map depicting trash generation categories within their jurisdiction.

As a next step, Permittees would then delineate and prioritize Trash Management Areas (TMAs) where specific control measures exist or are planned for implementation. TMAs delineated by Permittees are intended to serve as reporting units in the future. Reporting at the management area level provides the level of detail necessary to demonstrate implementation and progress towards trash reduction targets.

Once control measures are selected and implemented, Permittees will evaluate progress toward trash reduction targets using outcome-based assessment methods. As the results of the progress assessments are available, Permittees may choose to reprioritize trash management areas and associated control measures designed to improve trash reduction within their jurisdictions.

1.2.2 BASMAA Generation Rates Project

Through approval of a BASMAA regional project in 2010, Permittees agreed to work collaboratively to develop a regionally consistent method to establish trash generation rates within their jurisdictions. The project, also known as the *BASMAA Trash Generation Rates Project* (Generation Rates Project) assisted Permittees in establishing the rates of trash generation and identifying very high, high, moderate and low trash generating areas.

The term “trash generation” refers to the rate at which trash is produced or generated onto the surface of the watershed and is potentially available for transport via MS4s to receiving waters. Generation rates do not explicitly take into account existing control measures that intercept trash prior to transport. Generation rates are expressed as trash volume/acre/year and were established via the Generation Rates Project.

In contrast to trash generation, the term “trash loading” refers to the rate at which trash from MS4s enters receiving waters. Trash loading rates are also expressed as trash volume/acre/year and are equal to or less than trash generation rates because they account for the effects of control measures that intercept trash generated in an area before it is discharged to a receiving water. Trash loading rates are specific to particular areas because they are dependent upon the effectiveness of control measures implemented within an area. Figure 2 illustrates the difference between trash generation and loading.



Figure 2. Conceptual model of trash generation, interception and load.

Trash generation rates were estimated based on factors that significantly affect trash generation (i.e., land use and income). The method used to establish trash generation rates for each Permittee builds off “lessons learned” from previous trash loading studies conducted in urban areas (Allison and Chiew 1995; Allison et al. 1998; Armitage et al. 1998; Armitage and Rooseboom 2000; Lippner et al. 2001; Armitage 2003; Kim et al. 2004; County of Los Angeles 2002, 2004a, 2004b; Armitage 2007). The method is based on a conceptual model developed as an outgrowth of these studies (BASMAA 2011b).

Trash generation rates were developed through the quantification and characterization of trash captured in Water Board-recognized full-capture treatment devices installed in the San Francisco Bay area. Trash generation rates estimated from this study are listed for each land use type in **Table 1**. Methods used to develop trash generation rates are more fully described in BASMAA (2011b, 2011c, and 2012).

Table 1. San Francisco Bay Area trash generation rates by land use (gallons/acre/year).

Land Use	Low ^b	Best ^b	High ^b
Commercial & Services	0.7	6.2	17.3
Industrial	2.8	8.4	17.8
Residential ^a	0.3 - 30.2	0.5 - 87.1	1.0 - 257.0
Retail ^a	0.7 - 109.7	1.8 - 150.0	4.6 - 389.1
K-12 Schools	3	6.2	11.5
Urban Parks	0.5	5.0	11.4

^a For residential and retail land uses, trash generation rates are provided as a range that takes into account the correlation between rates and household median income.

^b For residential and retail land uses: Low = 5% confidence interval; Best = best fit regression line between generation rates and household median income; and, High = 95% confidence interval. For all other land use categories: High = 90th percentile; Best = mean generation rate; and, Low = 10th percentile.

1.2.3 Short-Term Trash Load Reduction Plan

In February 2012, the City of Half Moon Bay developed a Short-Term Plan that described the current level of control measures implementation and identified the type and extent to which new or enhanced control measures would be implemented to attain a 40% trash load reduction from its MS4 by July 1, 2014. Since that time, the City of Half Moon Bay has begun to implement its short-term plan. Control measures implemented to date via the short-term trash reduction plan are:

- Control Measure #1- Full-Capture Treatment Devices

The City installed 32 inlet screens meeting full-trash capture requirements within the Downtown and adjoining commercial areas. The City also accepted and commenced maintenance on Contech CDS treatment manhole constructed at the North Main Street/ Highway 1 intersection in 2007. Construction of a privately-maintained treatment manhole at the Coastside Senior Housing, 925 Main Street, was completed in 2012. Collectively, these measures treat 92.68 acres, which exceeds the City’s minimum full-trash capture requirement of 15 acres.

- Control Measure #2 – Single-Use Carryout Bag Policies

The City of Half Moon Bay has chosen to participate in the San Mateo County single-use bag ban. The ban went into effect in April 2013

- Control Measure #3 – Polystyrene Foam Food Service Ware Policies

The City adopted a ban on food service polystyrene foam containers in June 2011. The ban went into effect in August 2011. Enforcement is provided by the San Mateo County Division of Environmental Health in conjunction with the MRP Section C.4 business inspection program.

- Control Measure #4 – Enhanced On-Land and Shoreline Cleanups

The City is working with the State of California Department of Fish and Wildlife (formerly Fish and Game) to obtain a multi-year programmatic permit for maintenance of open ditches, channels, and creeks. The City has completed an inventory and map of watercourses within the City (sorted by ownership, proposed maintenance frequency, etc.) and is completing the environmental (CEQA)

document to obtain State DWW and Coastal Commission permits. An application to State DWW is in progress. The proposed maintenance activities will include trash pickup.

- Control Measure #5 – Activities to Reduce Trash from Uncovered Loads

The City has included language in its solid waste franchise agreements to require haulers to cover loads when transporting trash or construction debris through the City.

- Control Measure #6 – Public Education and Outreach

In addition to the control measures continued post-MRP adoption, the City is currently implementing or planning to implement the following public education and outreach control measures that were initiated after the MRP was adopted.

BASMAA Youth Outreach Campaign (Regional)

Through participation and funding of the regional BASMAA Youth Outreach Campaign, the City is implementing an outreach campaign designed to reduce littering from the target audience in the Bay Area. The Youth Outreach Campaign was launched in September 2011 and aims to increase the awareness of Bay Area Youth (ages 16-24) on litter and stormwater pollution issues, and eventually change their littering behaviors. Combining the ideas of Community Based Social Marketing with traditional advertising, the Youth Campaign aims to engage youth to enable the peer-to-peer distribution of Campaign messages. The Campaign will at least run through FY 13-14. A brief description of the Campaign activities is provided below:

- Raising Awareness: The Campaign is raising awareness of the target audience on litter and stormwater pollution issues. Partnerships with youth commissions, high schools, and other youth focused organizations have been developed to reach the target audience. Messages targeted to youth have been created and distributed via paid advertising, email marketing, Campaign website and social networking sites (e.g., Facebook and Twitter).
- Engage the Youth - The advertisements encourage the audience to participate in the Youth Campaign by joining a Facebook page, entering a contest, taking an online quiz, etc., and providing their contact information. At the beginning of FY 12-13, a video contest was launched to get Bay Area youth further involved in the Campaign. An online voting system was used to select the winning entry. Media advertising was conducted to promote the winning entry.
- Change Behaviors: To move the audience along the behavior change continuum, the Campaign is using electronic platforms such as email marketing and social networking sites to encourage participants to engage in increasingly more difficult behavior changes, such as participating in a clean-up, organizing a clean-up, etc.
- Maintain Engagement: The Campaign continues to interact with the target audience through email marketing and social media websites.

The Youth Campaign includes a pre and post campaign survey to evaluate the effectiveness of outreach. The pre-campaign survey was conducted in FY 11-12 and the post campaign survey will

begin in FY 13-14. Other evaluation mechanisms, such as website hits, number of youth engaged in the Campaign's social networking website, etc. are also being used to evaluate its effectiveness in increasing awareness and changing behavior.

Activities in FY 12-13 included maintaining the website www.BetheStreet.org, Facebook page, and Instagram account. A video contest asking participants to submit their best anti-litter video was also conducted. The Be the Street campaign received 52 entries in response to the contest. The winning video was promoted on television, Pandora (online music site), YouTube, Google, and Facebook.

Control measures described in this Long-Term Plan build upon actions taken to-date via City of Half Moon Bay's Short-Term Plan. A full description of control measures implemented via short and long-term plans is included in section 0. Outcomes associated with short-term plan implementation will be reported in the City of Half Moon Bay's Fiscal Year 2013-14 Annual Report, scheduled for submittal to the Water Board by September 15, 2014.

1.3 Organization of Long-Term Plan

This Long-Term Plan is organized into the following sections:

- 1.0 Introduction;
- 2.0 Scope of the Trash Problem;
- 3.0 Trash Management Areas and Control Measures;
- 4.0 Progress Assessment Strategies; and
- 5.0 References

Section 2.0 is intended to provide a description of the extent and magnitude of the trash problem in the City of Half Moon Bay. Control measures that will be implemented by City of Half Moon Bay as a result of this Long-Term Plan are described in section 3.0. Section 4.0 describes the methods that will be used to assess progress toward trash reduction targets.

2.0 SCOPE OF THE TRASH PROBLEM

2.1 Permittee Characteristics

Incorporated in 1959, the City of Half Moon Bay is located in San Mateo County, and has a jurisdictional area of 1280 acres. According to the 2010 Census, it has a population of 11,324, with a population density of 1,757 people per square mile and average household size of 2.72. Of the 11,324 residents who call Half Moon Bay home, 22.4% are under the age of 18, 7.0% are between 18 and 24, 22.8% are between 25 and 44, 32.2% are between 45 and 64, and 15.6% are 65 or older. The median household income was \$92,204 in 2010. The City of Half Moon Bay is home to Major employers are the Ritz-Carlton Hotel, the Nurserymen's Exchange, Bay City Flower, the Cabrillo Unified School District, Half Moon Bay Golf Links, and Sam's Chowder House.

The City is located at the junction of State Highway 1 and State Highway 92, and adjoins the Pacific Ocean. The City's Downtown Retail/ Commercial District is located immediately southeast of the intersection of the two highways, with additional retail areas located along Highway 92 and west of the highway intersection. There are some multi-family residential developments immediately south of the Downtown. The remainder of the City north and south of the Downtown is primarily single-family residential, agricultural (farming and nurseries, and open space). A gated golf-course and single-family residential community is located the far south end of the City. The City contains three public schools (Hatch Elementary, Cunha Middle School, and Half Moon Bay High). The City owns and maintains five parks, as well as a community center.

The City is bisected by Pilarcitos Creek, which discharges into the ocean just north of the Highway 1/ Highway 92 intersection. Frenchman's Creek traverses the northerly half of the City, and discharges into the ocean north of the Pilarcitos Creek outfall. A number of minor creeks and manmade ditches are located west of Highway 1 and discharge directly to the ocean.

The City's drainage system consists of closed pipes, open roadside ditches, and manmade channels. The Downtown area along Main Street and developed commercial areas along Highway 1, Highway 92, and North Main Street, as well as some residential areas near the Downtown, discharge via closed pipes to Pilarcitos Creek. The remainder of the residential areas drain via a combination of pipes, ditches, and channels directly into the ocean.

Much of the westerly edge of the City adjoining the ocean was subdivided in the 19th century but never improved. Much of this land is now owned by the State Department of Parks and Recreation. The Peninsula Open Space Trust owns several large properties south of the Downtown, and the Coastside Land Trust has been purchasing undeveloped lots in this area as well.

The City is a popular destination for visitors seeking access to the adjoining public beaches, and sees heavy traffic on the two State highways as well as local streets on weekends. The Downtown is also a popular destination. Many beachgoers park inland to avoid parking fees and walk via local streets to the beach.

Land uses within the City of Half Moon Bay depicted in ABAG (2005) are provided in Table 2. The City of Half Moon Bay is primarily comprised of five land uses. These include Commercial and Services, Residential, Retail, K-12 Schools, and Urban Parks. In addition, much of the land is undeveloped and/or held as permanent open space. There are no Industrial uses in the city.

The City’s finances, like that of many cities in California, was severely impacted by the Great Recession of 2008, and the City now operates on limited fiscal resources. The City’s Police Department was disbanded and the City contracts with the San Mateo County Sheriff for police services. Planning, Building, and Engineering functions are contracted out. Maintenance is provided by a Public Works Superintendent and two maintenance workers. Storm inlet cleaning is handled by the San Mateo County Public Works Department under contract.

In spite of limited staff and resources, the City stepped up to take full advantage of the San Francisco Estuary Project Trash Demonstration Project grant in 2011 and utilized grant funds to install over 30 inlet screens covering much of the Downtown. The City has also joined in the San Mateo County Single Use Carryout Bag Ban and has adopted a ban on Polystyrene Food Serve Ware products.

Table 2. Percentages of the City of Half Moon Bay’s jurisdictional area¹ within land use classes identified by ABAG (2005)

Land Use Category	Jurisdictional Area (acres)	% of Jurisdictional Area
Commercial and Services	66.3	1.7%
Industrial	28.9	0.7%
Residential	810.8	20.8%
Retail	64.6	1.7%
K-12 Schools	78.0	2.0%
Urban Parks	23.7	0.6%
Other	2,822.6	72.5%

2.2 Trash Sources and Pathways

Trash in San Francisco Bay Area creeks and shorelines originates from a variety of sources and is transported to receiving waters by a number of pathways (Figure 3). Of the four source categories, pedestrian litter includes trash sources from high traffic areas near businesses and schools, transitional areas where food/drinks are not permitted (e.g. bus stops), and from public or private special events with high volumes of people. Trash from vehicles occurs due to littering from automobiles and uncovered loads. Inadequate waste container management includes sources such as overflowing or uncovered containers and dumpsters as well as the dispersion of household and business-related trash and recycling materials before, during, and after collection. On-land illegal dumping of trash is the final source category.

Trash is transported to receiving waters through three main pathways: 1) Stormwater Conveyances; 2) Wind; and, 3) Direct Dumping. Stormwater or urban runoff conveyance systems (e.g., MS4s) consist of curbs/gutters, and pipes and channels that discharge to urban creeks and the

¹ A Permittee’s jurisdictional area is defined as the urban land area within a Permittee’s boundary that is not subject to stormwater NPDES Permit requirements for traditional and non-traditional small MS4s (i.e. Phase II MS4s) or the California Department of Transportation, or owned and maintained by the State of California, the U.S. federal government or other municipal agency or special district (e.g., flood control district).

San Francisco Bay shorelines. Wind can also blow trash directly into creeks or the Bay. Lastly, trash in receiving waters can also originate from direct dumping into urban creeks and shorelines.

This Long-term Plan and associated trash control measures described in Section 3.0 are focused on reducing trash from one of the transport pathways illustrated in Figure 3– **stormwater conveyances**. Specifically, the Long-term Plan is focused on reducing the impacts of discharges from MS4s to San Francisco Area receiving waters and the protection of associated beneficial uses.

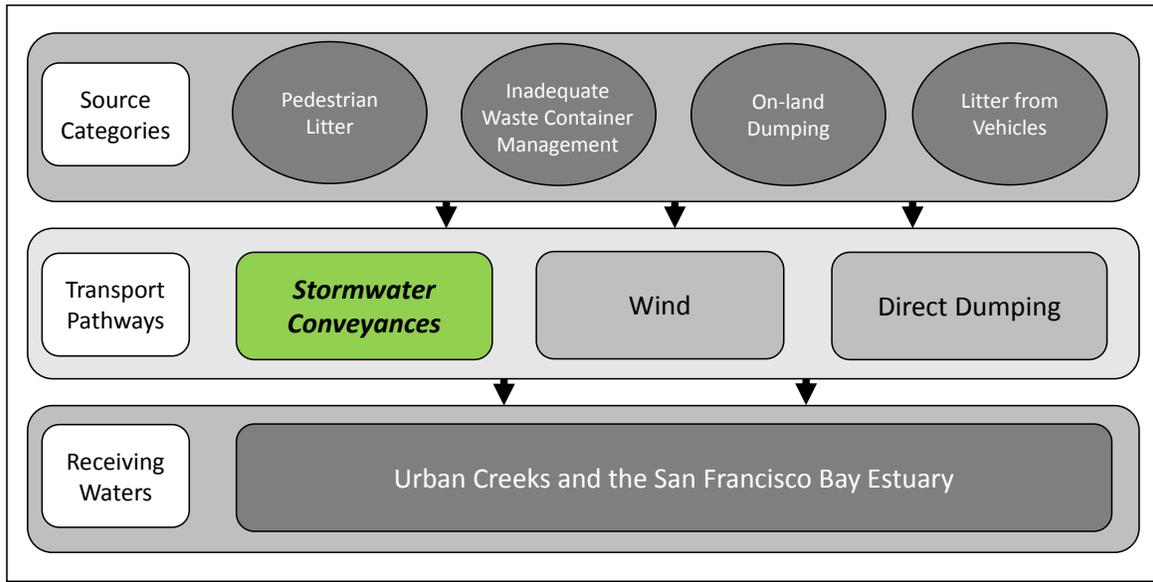


Figure 3. Trash sources categories and transport pathways to urban creeks.

Illegal Dumping

The City of Half Moon Bay responds to reports of illegal dumping on an as-needed basis.

Wind-Blown Trash

The City of Half Moon Bay performs annual maintenance of the open ditches and channels that form much of the City’s drainage system. This includes removal of trash that accumulates in the system, including wind-blown trash. The is working with the State of California Department of Fish and Wildlife (formerly Fish and Game) to obtain a multi-year programmatic permit for maintenance of open ditches, channels, and creeks. The City has completed an inventory and map of watercourses within the City (sorted by ownership, proposed maintenance frequency, etc.) and is completing the environmental (CEQA) document to obtain State DWW and Coastal Commission permits. An application to State DWW is in progress. The proposed maintenance activities will include trash pickup.

2.3 Trash Generating Areas

2.3.1 Generation Categories and Designation of Areas

The process and methods used to identify the level of trash generation within the City of Half Moon Bay are described in this section and illustrated in Figure 4.

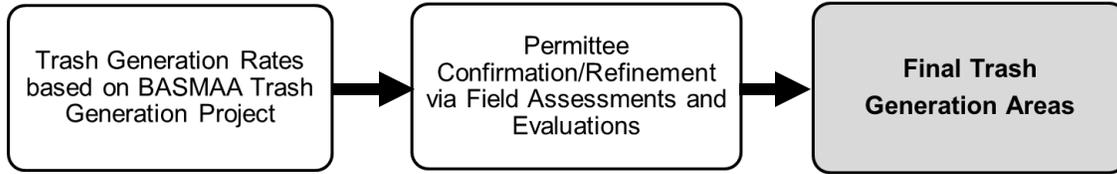


Figure 4. Trash sources categories and transport pathways to urban creeks.

As a first step, trash generation rates developed through *the BASMAA Trash Generation Rates Project* were applied to parcels within the City of Half Moon Bay based on current land uses and 2010 household median incomes. A Draft Trash Generation Map was created as a result of this application. The draft map served as a starting point for the City of Half Moon Bay to identify trash generating levels. Levels of trash generation are depicted on the map using four trash generation rate (gallons/acre/year) categories that are symbolized by four different colors illustrated in Table 3.

Table 3. Trash generation categories and associated generation rates (gallons/acre/year).

Category	Very High	High	Moderate	Low
Generation Rate (gallons/acre/year)	> 50	10-50	5-10	< 5

The draft map was based on the following assumptions:

1. The two State Highways that traverse the City (Highway 1 and Highway 92) were placed in the Very High Trash Generation Category. The highways are under State control and are shown as non-jurisdictional areas on the map.
2. Retail/ commercial areas were placed in the High Trash Generation Category. This includes the Downtown retail/ commercial areas along Main Street south of Pilarcitos Creek, the newer commercial areas along North Main Street and Highways 1 and 92 (north of Pilarcitos Creek), and isolated commercial areas such as Sam’s Chowder House.
3. Parks (Smith Field Little League, Ocean View, Frenchman’s Creek, and Kehoe), schools (Hatch Elementary, Cunha Middle, Half Moon Bay High), medium and high density residential, public -institution (Community Center) and various non-residential uses (golf course) were placed in the Medium Trash Generation Category.
4. Single-family residential and open space areas were placed in the Low Trash Generation Category. It should be noted that “residential” areas west of Railroad Avenue (old Ocean Shore Railroad right-of-way) were mapped in the 19th Century but never improved or developed. Much of the land has been purchased by the Peninsula Open Space Trust, and given local and State Coastal Commission requirements it is unlikely this area will ever be developed. These neighborhoods in effect are open space.

The City of Half Moon then reviewed and refined the draft trash generation map to ensure that trash generation categories were correctly assigned to parcels or groups of parcels. City staff refined maps using the following process:

1. Based upon our knowledge of trash generation and problem areas within the City, staff identified areas on the draft map that potentially had incorrect trash generation category designations.
2. Trash generation category designations initially assigned to areas identified in step #1 were then assessed and confirmed/refined by the City using the methods listed below.

a. On-Land Visual Assessments

To assist Permittees with developing their trash generation maps, BASMAA developed a *Draft On-land Visual Trash Assessment Protocol (Draft Protocol)*. The Draft Protocol entails walking a street segment and visually observing the level of trash present on the roadway, curb and gutter, sidewalk, and other areas adjacent to the street that could potentially contribute trash to the MS4. Based on the level of trash observed, each segment (i.e., assessment area) was placed into one of four on-land assessment condition categories that are summarized in Table 4. Using the Draft Protocol the city assessed a total of five areas to assist in conducting/refining trash generating area designations.

Staff completed the field reviews of between March and May to observe trash accumulation, as well as to confirm land uses and drainage tributary boundaries. Based on these reviews, the following was determined:

- 1) Smith Field Little League Park and Wavecrest Road (access road to park) accumulates a fair amount of litter due to park and nearby beach use (this was confirmed by maintenance staff).
- 2) The areas east of the Downtown Main Street retail/ commercial district, which the draft Trash Generation Map showed as including a number of non-residential Medium Trash Category uses, is generally free of litter. Several of the non-residential uses were in fact residential uses, or consisted of non-commercial uses such as barns or storage sheds. The Church property on Johnston Street south of Kelly Avenue was well maintained, with no litter visible on the adjoining streets. As a result, most of this area was reclassified into the Low Trash Generation Category.
- 3) Non-residential uses along Redondo Beach Road were found to be single-family residential homes. The area has been reclassified from Medium to Low Trash Generation.
- 4) Litter was observed along Main Street in front of the multi-family residential units near the south end of the Downtown.

5) The boundary of the drainage areas served by existing full-trash capture devices was adjusted based on actual topographic conditions – some areas were added, others were removed. The result was an increase in existing land being treated, from 78 acres to 92 acres.

Photos, field notes, etc., for this effort are on file at the offices of the City’s contract municipal engineering firm.

Table 4. Definitions of on-land trash assessment condition categories.

On-land Assessment Condition Category	Summary Definition
A (Low)	Effectively no trash is observed in the assessment area.
B (Moderate)	Predominantly free of trash except for a few pieces that are easily observed.
C (High)	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets.
D (Very High)	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area.

b. Querying Municipal Staff or Members of the Public

The above findings were discussed with the City’s Public Works Superintendent, who generally concurred with the findings.

3. Based on assessments conducted to confirm/refine trash generation category designations, the City created a final trash generation map that depicts the most current understanding of trash generation within the City of Half Moon Bay. The City documented this process by tracking the information collected through the assessments and subsequent refinements to the Draft Trash Generation Map. The City of Half Moon Bay’s Final Trash Generation Map is included as Figure 5.

2.3.2 Summary of Trash Generating Areas and Sources

Summary statistics for land use and trash generation categories generated through the mapping and assessment process are presented in Table 5. Trash sources can be summarized as follows:

- 1) General litter and waste from the Downtown Main Street Retail/ Commercial District.
- 2) Litter from commercial areas in the Highway 1- Highway 92 – North Main Street area (north of Pilarcitos Creek).
- 3) Litter from vehicles on Highways 1 and 92.
- 4) Litter from park use.
- 5) Litter from beach access routes.
- 6) Litter generated on or along access routes to schools.

7) Trash accumulated in open roadside ditches.

Illegal dumping does not appear to be a significant factor in overall trash loads. The September 2012 Hot Spot Cleanup (Trail on Pilarcitos Creek at Highway 1) yielded a single possible dumping item, a piece of a plastic child’s backyard play equipment.

Table 5. Percentage of jurisdictional area within the City/County of [insert municipality name] assigned to each trash generation category.

Trash Generation Category	Jurisdictional Area (Acres)	Commercial and Services	Industrial	Residential	Retail	K-12 Schools	Urban Parks	Other
Very High	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
High	50.9	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Medium	186.7	27.0%	11.6%	10.7%	0.0%	38.0%	12.7%	0.0%
Low	3,657.3	0.4%	0.2%	21.6%	0.4%	0.2%	0.0%	77.2%

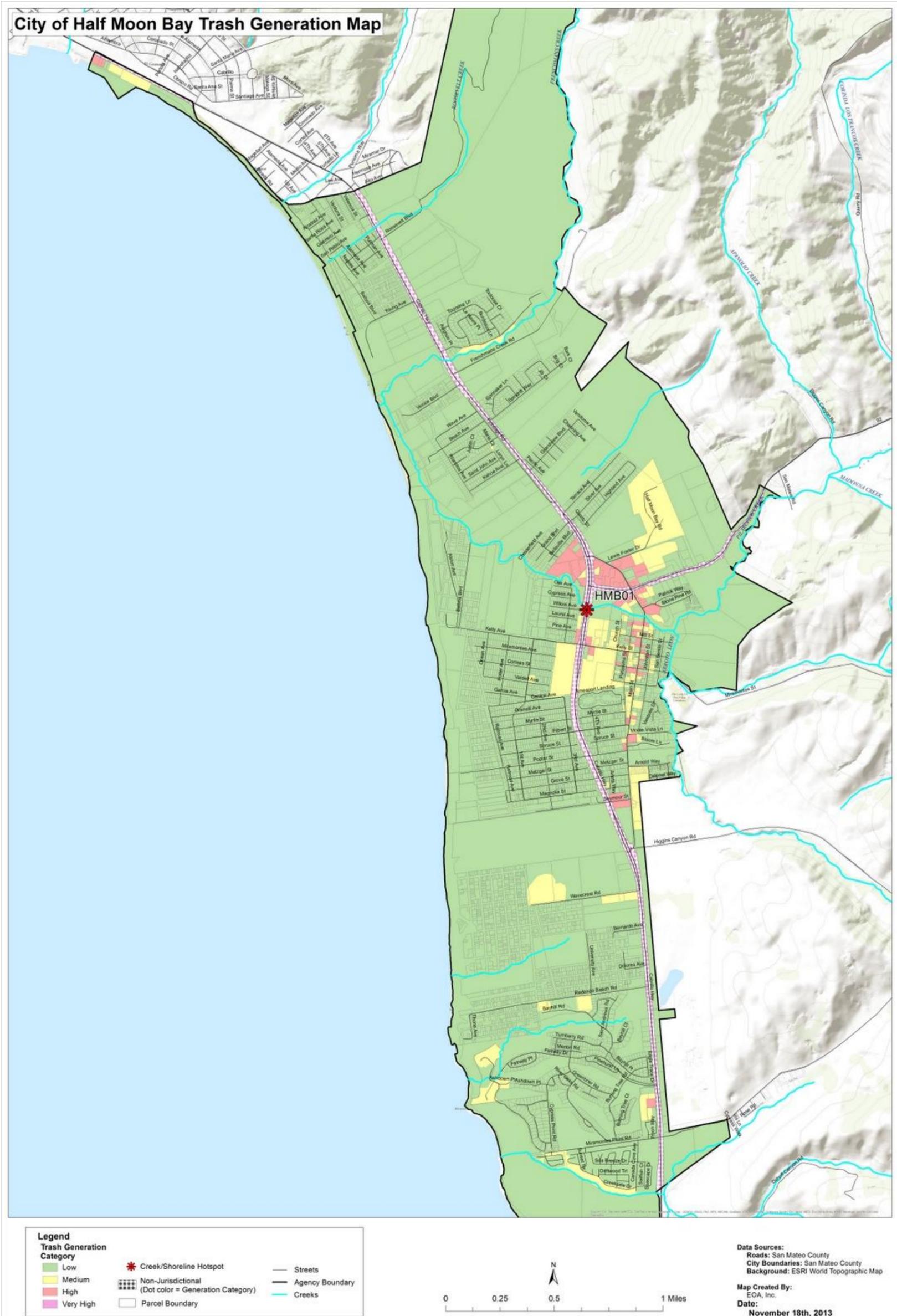


Figure 5. Final Trash Generation Map for the City of Half Moon Bay

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3.0 TRASH MANAGEMENT AREAS AND CONTROL MEASURES

This section describes the control measures that the City of Half Moon Bay has or plans to implement to solve trash problems and achieve a target of 100% (i.e. full) trash reduction from their MS4 by July 1, 2022. The selection of control measures described in this section is based on the City of Half Moon Bay's current understanding of trash problems within its jurisdiction and the effectiveness of control measures designed to reduce trash impacts associated with MS4 discharges. Information on the effectiveness of some trash control measures is currently lacking and therefore in the absence of this information, the City based its selection of control measures on existing effectiveness information, their experience in implementing trash controls and knowledge of trash problems, and costs of implementation. As knowledge is gained through the implementation of these control measures, the City may choose to refine their trash control strategy described in this section. If significant revisions or amendments are made, a revised Long-Term Plan will be submitted to the Water Board through the City of Half Moon Bay's annual reporting process.

3.1 Management Area Delineation and Prioritization

Consistent with the long-term plan framework, the City of Half Moon Bay delineated and prioritized trash management areas (TMAs) based on the geographical distribution of trash generating areas, types of trash sources, and current or planned control measure locations. TMAs are intended to form the management units by which trash control measure implementation can be tracked and assessed for progress towards trash reduction targets. Once delineated, TMAs were also prioritized for control measure implementation. The City of Half Moon Bay's primary management areas were selected based on the spatial distribution of trash generating areas and the location of specific existing or planned management actions within City's jurisdiction. City staff used the following procedure to designate TMAs:

Trash Management Area 1

The areas included in Trash Management Area 1 are generally located within the Very High, High, or Medium Trash Generating Areas, and installation of Full-Trash Capture Devices is an appropriate means of managing trash, and would be the highest priority for implementation of measures under the Long-Term Trash Reduction Plan. Subareas are as follows:

1-A: Located between Main Street and Highway 1, south of Pilarcitos Creek and extending south of Kelly Avenue. Land uses include miscellaneous commercial/ retail, the City's Community Center, Library, and portions of Manuel Cunha Intermediate School. Kelly Avenue provides a link for vehicle traffic from the Downtown area on Main Street to Highway 1 and Half Moon Bay State Beach to the west. The drainage outfall is via a ditch on Highway 1 to the south side of Pilarcitos Creek.

1-B: Located between Main Street and Highway 1, extending along Kelly Avenue to Railroad Avenue. Land uses include portions of Manuel Cunha Intermediate School, Alvin Hatch Elementary School, and portions of Highway 1. Kelly Avenue provides access at its west terminus at Railroad Avenue to one of the parking lots for Half Moon Bay State Beach. The drainage outfall is via a closed pipe into an open ditch at Railroad Avenue that flows across the State Beach into the Pacific Ocean.

1-C: Located along the east end of Main Street near the south end of the Downtown. Land uses include miscellaneous retail/ commercial uses. The drainage outfall is at two street inlets on Main Street at the north end of the area.

1-D: Located on the east side of Main Street, north of Pilarcitos Creek. Land uses include a retail center and Pilarcitos Creek Park (Carter Park). The retail center anchors the north end of Downtown and includes a number of food establishments. The drainage outfall is via a closed pipe system that outlets from the park into Pilarcitos Creek.

1-E: Located between Highway 1 and the eastern City limits, north of the Highway 1/ Main Street intersection. Land uses include the James Ford auto dealership, multi-family residential on the east side of Main Street, a community theatre, and single-family residential. The drainage outfall is at a culvert under Highway 1 north of Magnolia Street. The ditch continues westerly along Magnolia through a detention pond and into the Pacific Ocean.

1-F: Located west of Main Street just south of Pilarcitos Creek. Land uses include a mix of commercial and residential. The area includes a portion of Kelly Avenue. The drainage outfall is via a ditch at the north end of Church Street into Pilarcitos Creek.

Trash Management Area 2

The areas included in Trash Management Area 2 are four of the five parks under City ownership and management. The fifth park, Carter Park, is located within Subarea 1-D, and is planned for eventual full-trash capture treatment. These areas would be given lower priority for implementation of new management actions (Subarea 2-D would be the exception to this). These are located in the Medium Trash Generating Area.

2-A: Frenchman's Creek Park. The park is located on Ruisseau Francias Avenue in a residential area near the northerly end of town. The park is largely undeveloped and parking is limited to on-street parking. Improvements consist of a small seating/ picnic area. The drainage outfall is into Frenchman's Creek.

2-B: Kehoe Park. The park is located on St. Joseph Avenue in a residential neighborhood near the north – central part of town. The park is a neighborhood pocket park, The park has a small lawn and a play equipment area. The drainage outfall is via the neighborhood drainage system to a ditch across the State park into the Pacific Ocean.

2-C: Ocean View Park. The park is located on Alsace Lorraine Avenue in the residential area west of Highway 1 and the Downtown. The park is located within Subarea 1-B. The park is a neighborhood pocket park. The park has a small lawn and a play equipment area. The drainage outfall is via the neighborhood drainage system to the Kelly Avenue ditch across the State park into the Pacific Ocean.

2-D: Smith Field Park. The park is located on Wavecrest Drive south of the Downtown, west of Highway 1. Improvements include a Little League Field and gravel parking lot. Parking is used by beachgoers for access to undeveloped beach areas to the west.

Trash Management Area 3

The areas included in Trash Management Area 3 include various school, retail or commercial properties with drainage outfalls directly into watercourses or for which the drainage system is unknown at this time. These are located in both the Medium and High Trash Generating Areas. Further field review is needed in some cases to determine the actual level of trash generated at these locations. Implementation of measures would be based on actual trash generation and practicality of measures.

3-A: Half Moon Bay High School. The school is located at the easterly end of Lewis Foster Drive, a private street. The layout of the drainage system is not known and appears to be split between several watersheds.

3-B: A retail/ commercial area west of the Highway 1/ Highway 92 intersection. Land uses include fast food and takeout. The drainage outfall appears to be via the onsite private drainage system into Pilarcitos Creek.

3-C: A commercial area at the southwest corner of Main Street and Highway 92. Drainage appears to be westerly away from the streets across vacant land into Pilarcitos Creek.

3-D: An isolated retail/ commercial area on Highway 1 near the north end of town. Land uses include Sam's Chowder House and a hotel. The drainage system layout is not known.

3-E: An isolated commercial area on Highway 1 near the south end of town. The drainage system layout is not known.

3-F: Half Moon Bay Golf Course Clubhouses. The drainage outfall is into a private drainage system and into the Pacific Ocean,

Trash Management Area 4

Trash Management Area 4 includes areas currently treated by full-trash capture devices.

4-A: This area is located north of Highway 92 and east of Highway 1, with another area south of Highway 92 and east of Main Street. The portion of Highway 92 east of Main Street is treated by the full-trash capture devices. The devices are maintained by the City.

4-B: This area is located along both sides of Main Street, encompassing most of the Downtown retail/ commercial district. The devices are maintained by the City.

4-C: This area includes two senior housing developments located east of Main Street at Arnold Way. The devices are privately maintained.

Trash Management Area 5

The areas included in Trash Management Area 5 are the Low Trash Generating Areas. Land uses include single family residential, isolated commercial areas (such as a pumpkin farm and nurseries on Highway 1), open space, and State Beaches.

A map depicting the City’s TMAs is included as Figure 6. All jurisdictional areas within the city are included within a TMA. The amount of jurisdictional land area and associated trash condition categories for each TMA are included in Table 6.

Table 6. Jurisdictional area and percentage of each Trash Management Area (TMA) comprised of trash generation categories

TMA	Jurisdictional Area (Acres)	Trash Generation Rate			
		Very High	High	Medium	Low
1A	32.3	0.0%	6.8%	55.3%	37.9%
1B	113.9	0.0%	0.3%	23.6%	76.0%
1C	4.6	0.0%	32.6%	29.4%	38.0%
1D	3.4	0.0%	71.5%	28.5%	0.0%
1E	25.5	0.0%	12.9%	40.7%	46.5%
1F	5.8	0.0%	14.8%	34.0%	51.2%
2A	4.9	0.0%	0.0%	100.0%	0.0%
2B	0.2	0.0%	0.0%	100.0%	0.0%
2C	0.7	0.0%	0.0%	100.0%	0.0%
2D	12.2	0.0%	0.0%	100.0%	0.0%
3A	37.7	0.0%	0.0%	100.0%	0.0%
3B	13.1	0.0%	91.0%	4.6%	4.4%
3C	4.3	0.0%	62.7%	37.3%	0.0%
3D	8.6	0.0%	18.9%	65.8%	15.3%
3E	5.0	0.0%	21.6%	78.4%	0.0%
3F	23.4	0.0%	0.0%	100.0%	0.0%
4A	57.9	0.0%	29.0%	21.6%	49.4%
4B	30.2	0.0%	16.4%	30.1%	53.5%
4C	5.2	0.0%	0.0%	0.0%	100.0%
4D	9.3	0.0%	0.0%	36.3%	63.7%
5	3,496.9	0.0%	0.0%	0.3%	99.6%

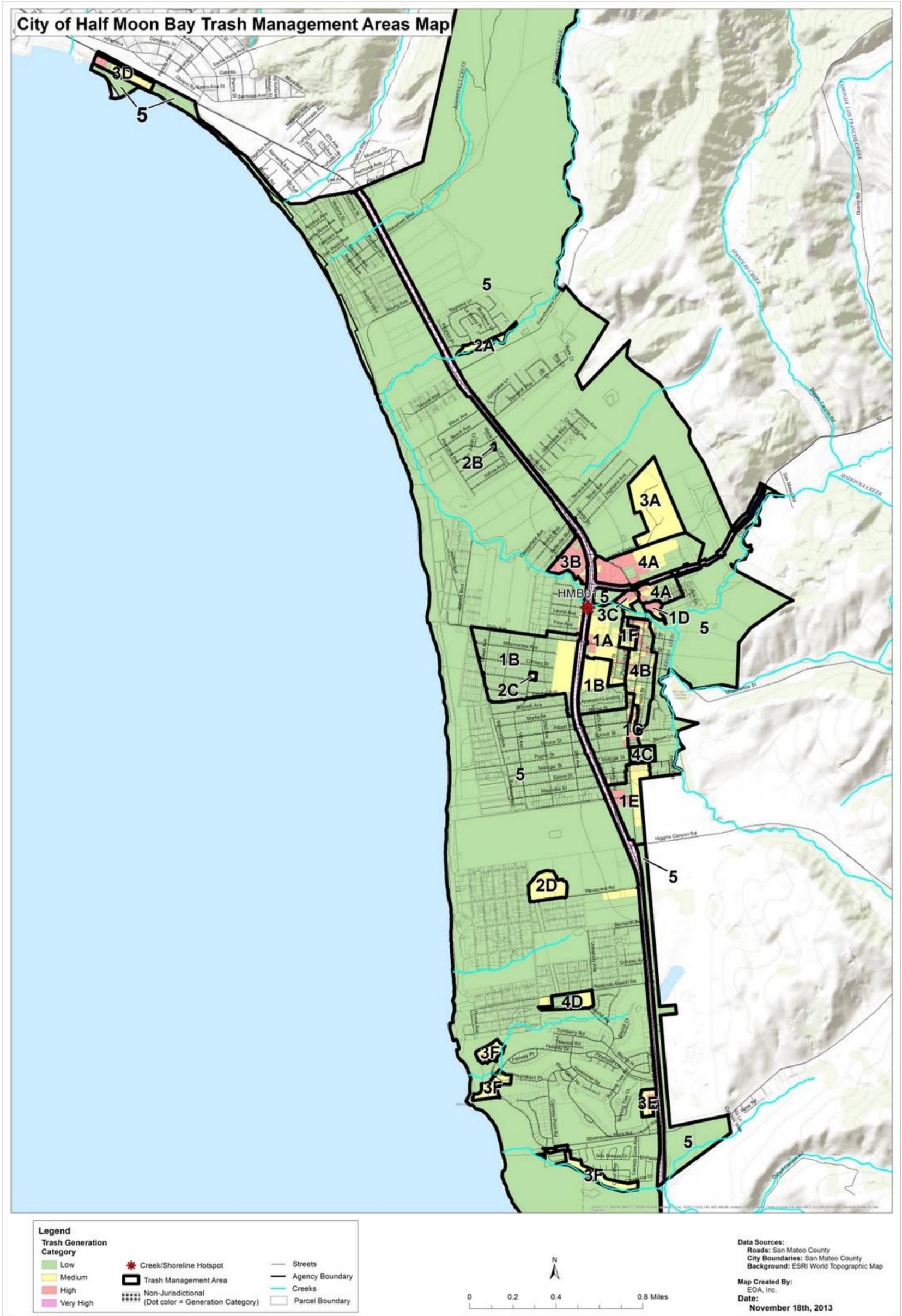


Figure 6. Trash Management Area Map for the City of Half Moon Bay

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3.2 Current and Planned Trash Control Measures

Current control measures include full-capture treatment devices, street sweeping, onland cleanups (ditch and creek maintenance, assistance to volunteer coastal cleanups, cleanup of illegal dumping (as needed), and business inspections. The City is also participating in the San Mateo Single-Use Carryout Bag Ban and has adopted a Polystyrene Foam Food Serve Ware Ban.

Additional measures to be implemented under the City's Long-Term Management Plan are primarily new full-trash capture devices. The City has a limited engineering and public works staff, and extensive assessment efforts will divert staff from ongoing daily work, including implementation of new trash management actions. Implementation of a plan that involves a high-level of assessment activity would not be practical given the City's limited staff resources. The City instead will put this effort into installation and maintenance of trash-capture devices. It is the City's understanding that these actions will eliminate the need for assessment of those areas served by full-trash capture devices.

The location of existing full-trash capture devices and the drainage tributary areas are shown on Figure 7.

3.2.1 Trash Management Area #1

The areas included in Trash Management Area 1 are generally located within the Very High, High, or Medium Trash Generating Areas, and installation of Full-Trash Capture Devices is an appropriate means of managing trash, and would be the highest priority for implementation of measures under the Long-Term Trash Reduction Plan.

Full-Capture Treatment Devices

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

These areas currently do not have full-capture treatment devices.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

Installation of additional full-capture devices will commence with the 2014-2015 Fiscal Year budget after July 2014.

Actions Planned for Future Implementation Between July 2014 and July 2022.

The following Full-Capture Treatment Devices will be installed:

1-A: A full trash capture device will be installed near the Highway 1/ Kelly Avenue intersection. Further engineering is needed to determine the type and exact location of the device. Coordination with Caltrans may also be needed for work within the Highway 1 right-of-way. Work may be completed in conjunction with a planned storm drain installation in Highway 1 from Kelly Avenue to Pilarcitos Creek. Funding for this work is not set and the construction timing is not been defined.

1-B: A full-trash capture device will be installed on Kelly Avenue near Railroad Avenue, near the existing outfall onto Half Moon Bay State Beach. The location of the device may be adjusted upstream on Kelly Avenue closer to Alvin Hatch Elementary School to reduce the tributary area and in turn reduce costs. Coastal Commission jurisdiction could be an issue and relocating the unit upstream from the ocean may remove the project from Coastal Commission jurisdiction. Locating the unit as far downstream as possible would be ideal in order to include litter generated by beach going traffic on Kelly Avenue. The unit would treat portions of Highway 1, which is a non-jurisdictional area, as well as Ocean View Park (Subarea 2-A).

1-C: Two full trash capture inlet screens will be installed on Main Street on two existing inlets north of Monte Vista Avenue.

1-D: A single full trash capture inlet screen will be installed at the storm drain outfall into Pilarcitos Creek at Carter Park.

1-E: A full-trash capture device will be installed near the Magnolia Avenue culvert crossing of Highway 1. Further engineering work is needed to determine the optimum location and type of device.

The City is currently processing a land development application by the James Ford automobile dealership to expand and rehabilitate the dealership, and convert unused storage areas to single-family residential housing. The will involve modifications to the existing drainage system, and incorporating of full-trash capture devices into the improvements will be studied.

1-F: One-two full-capture inlet screens will be installed at the north end of Church Street into Pilarcitos Creek. Some engineering will be needed to incorporate the screens into the existing ditch.

Based on the low cost and simple installation of the inlet screens for Areas 1-C, 1-D, and 1-F, the City will schedule completing these installations during the 2014-2015 Fiscal Year.

Installation of the devices for Areas 1-A, 1-B, and 1-E will take a number of years in order to complete engineering and identify funding. It is anticipated that initial engineering work will begin during the 2014-2015 Fiscal Year. Improvements would not be installed before the 2015-2016 Fiscal Year.

Street Sweeping

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

The City's street sweeping includes sweeping most streets in residential areas once per month, the Downtown area one per week, and arterial streets once per week. Parking prohibitions on street sweeping days does not currently exist, although sweeping occurs during off-peak retail hours when parking demands are lower, allowing better access to the curb.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned. Enhanced street sweeping activities will not be implemented. Increasing street sweeping to greater than once per week in the Downtown and on arterial streets is not practical. While it would be possible to increase the frequency of street sweeping in residential areas, the low trash-generation rate for these streets would not result in an significant overall increase in collected trash. Finally, since by definition this Trash Management Area will receive full-capture treatment devices, increased street sweeping would be moot.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned. See above.

On-Land Trash Cleanups

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Pre-MRP on-land cleanup activities include removal of homeless encampments (as needed) and assistance to volunteer groups (Coastside Land Trust and Peninsula Open Space Trust) who perform annual cleanups of properties owned by these organizations.

Carter Park (within Subarea 1-D) is maintained (trash receptacles emptied, litter picked up) on a weekly basis.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

The City is working with the State of California Department of Fish and Wildlife (formerly Fish and Game) to obtain a multi-year programmatic permit for maintenance of open ditches, channels, and creeks. The City has completed an inventory and map of watercourses within the City (sorted by ownership, proposed maintenance frequency, etc.) and is completing the environmental (CEQA) document to obtain State DWW and Coastal Commission permits. An application to State DWW is in progress. The proposed maintenance activities will include trash pickup. A timeline for completion of the program has not been established due to the uncertainty of permitting by the State agencies.

Enhanced homeless encampment cleanup has not been found to be necessary due homeless encampments not being a problem.

Actions Planned for Future Implementation Between July 2014 and July 2022.

See above .

Activities to Reduce Trash from Uncovered Loads

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Actions did not exist prior to the MRP effective date.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

The City has included language in its solid waste franchise agreements to require haulers to cover loads when transporting trash or construction debris through the City.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

Anti-Littering and Illegal Dumping Enforcement Activities

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

The Municipal Code prohibits littering and dumping. The illegal dumping program includes response to complaints, identification of offenders (if possible), and cleanup of debris if the responsible party cannot be found.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

Improved Trash Bins/ Container Management

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Inspection of trash containers and bins was provided in conjunction with the business inspection program under the requirements of the prior Countywide permit; these measures were replaced with measures in conformance with Section C.4 of the MRP upon its' adoption.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

Inspection of trash containers and bins is provided in conjunction with the business inspection program as required under Section C.4 of the MRP.

New and redeveloped commercial and retail development will be required to provide covered and plumbed to sanitary sewer covered trash bin enclosures, in conformance with Section C.3 of the MRP.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions planned.

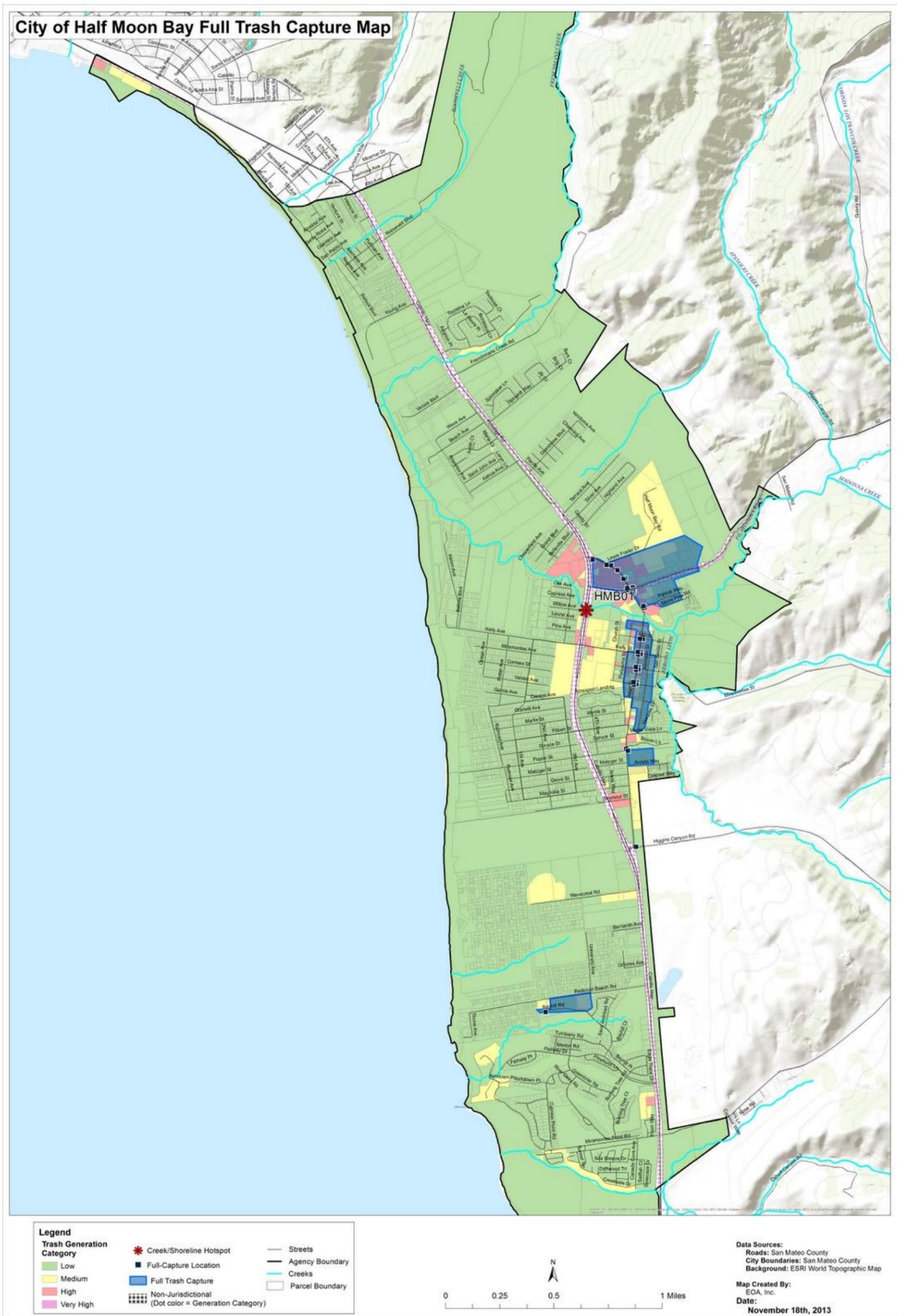


Figure 7. Trash Full Capture Device Map for the City of Half Moon Bay

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3.2.2 Trash Management Area #2

The areas included in Trash Management Area 2 are four of the five parks under City ownership and management. The four parks include Frenchman’s Creek Park, Kehoe Park, Ocean View Park, and Smithfield Park. The fifth park, Carter Park, is located within Subarea 1-D and is planned to receive full-trash capture treatment. These areas would be given lower priority for implementation of new management actions (Subarea 2-D would be the exception to this). These are located in the Medium Trash Generating Area.

Full-Capture Treatment Devices

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Full-capture devices were not installed prior to the MRP effective date.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

Full-capture devices were not installed during this time period.

Actions Planned for Future Implementation Between July 2014 and July 2022.

Subarea 2-D: Improvement to the Smith Field Little League Park is proposed under the City’s Capital Improvement Program. Funding for design is included in the 2013-2014 Fiscal Year budget; design will commence in early 2014. Construction funding is proposed for the 2014-2015 or 2015-2016 Fiscal Years. Improvements would include improved grading and drainage for the field and parking lot. Runoff would be conveyed through a series of ditches for discharge into the existing ditch downstream of the park. Full-trash capture screens would be installed at the downstream end of the park (C.10 measures would be incorporated into required C.3 treatment measures).

Subarea 2-C: This park may receive full-capture treatment when the installation of the Subarea 1-C full-capture treatment device is completed.

On-Land Trash Cleanups

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Parks are maintained (trash receptacles emptied, litter picked up) on a weekly basis.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned. No new management actions are planned. Existing trash collection and litter pickup activities will remain.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned. No new management actions are planned. Existing trash collection and litter pickup activities will remain.

Anti-Littering and Illegal Dumping Enforcement Activities

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

See “Onland Cleanups” above.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

Improved Trash Bins/ Container Management

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

See “Onland” Cleanups above.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

3.2.3 Trash Management Area #3

The areas included in Trash Management Area 3 include various school, retail or commercial properties with drainage outfalls directly into watercourses or for which the drainage system is unknown at this time. These are located in both the Medium and High Trash Generating Areas. Further field review is needed in some cases to determine the actual level of trash generated at these locations. Implementation of measures would be based on actual trash generation and practicality of measures.

Full-Capture Treatment Devices

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

None, areas with existing full-capture treatment devices are included in TMA #4.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

See above.

Actions Planned for Future Implementation Between July 2014 and July 2022.

3-A: Further research is needed to determine the drainage layout and discharge points of the high school. Based on better understanding of the system, additional full-trash capture measures may be installed downstream of the school once the drainage enters the public street system. This area would likely be reclassified into Trash Management Area 1. A portion of the area may drain to TMA Subarea 4-A, which already has full-capture treatment devices in place.

3-B: Further research is needed to determine the drainage layout and discharge points of the shopping center. Discussion is also needed with the management of the center. Installation of full-trash capture devices at the outfalls is the presumed management action. Installation could be accomplished by voluntary action on the part of the management, a cooperative project with the City, or a condition of approval for upgrades to the center.

Research will continue during the current 2013-2014 Fiscal Year and will be completed during the 2014-2015 Fiscal Year. Installation of full-capture treatment devices (if determined to be an appropriate measure) or an alternate approach would commence in the 2015-2016 Fiscal Year.

On-Land Trash Cleanups

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

No actions were in place prior to the MRP effective date.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No actions were implemented during this time period.

Actions Planned for Future Implementation Between July 2014 and July 2022.

3-F: Field review and discussion with the management of the golf course is needed to determine the level of trash generation and effectiveness of existing actions. It is expected that the management provides high level of existing maintenance to maintain the aesthetics of the site, including litter pickup. The site is also excluded from the general public, which limits littering and dumping.

It is anticipated that this work can be completed during the 2014-2015 Fiscal Year.

Areas Requiring Further Study

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

No actions were implemented during this time period.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No actions were implemented during this time period.

Actions Planned for Future Implementation Between July 2014 and July 2022.

3-C: Further study is needed to determine discharge points of drainage and level of trash generation. Dependent on results, the area may be reclassified into Trash Management Area 1, Area 4 (if included in a treatment area already), downgraded to Trash Management Area 5, or placed in a new classification involving a series of management actions by the owners.

3-D: Further study is needed to determine discharge points of drainage and level of trash generation. Dependent on results, the area may be reclassified into Trash Management Area 1, downgraded to Trash Management Area 5, or placed in a new classification involving a series of management actions by the owners.

3-E: Further study is needed to determine discharge points of drainage and level of trash generation. Dependent on results, the area may be reclassified into Trash Management Area 1, downgraded to Trash Management Area 5, or placed in a new classification involving a series of management actions by the owners.

It is anticipated that this study will be completed during the 2014-2015 Fiscal Year and that new measures will start to be implemented during the 2015-2016 Fiscal Year.

Anti-Littering and Illegal Dumping Enforcement Activities

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

The Municipal Code prohibits littering and dumping. The illegal dumping program includes response to complaints, identification of offenders (if possible), and cleanup of debris if the responsible party cannot be found.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

Improved Trash Bins/ Container Management

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Inspection of trash containers and bins was provided in conjunction with the business inspection program under the requirements of the prior Countywide permit; these measures were replaced with measures in conformance with Section C.4 of the MRP upon its' adoption.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

Inspection of trash containers and bins is provided in conjunction with the business inspection program as required under Section C.4 of the MRP.

New and redeveloped commercial and retail development will be required to provide covered and plumbed to sanitary sewer covered trash bin enclosures, in conformance with Section C.3 of the MRP.

Actions Planned for Future Implementation Between July 2014 and July 2022.

Additional measures may be adopted by private property owners pending completion of additional research noted above.

3.2.4 Trash Management Area #4

Trash Management Area 4 includes areas currently treated by full-capture treatment devices. Therefore, no additional full-capture treatment measures are proposed. Other control measures have or will be implemented consistent with TMA #1.

Trash Management Area 4 includes areas currently treated by full-trash capture devices.

Full-Capture Treatment Devices

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Subarea 4-A: This area is located north of Highway 92 and east of Highway 1, with another area south of Highway 92 and east of Main Street. The portion of Highway 92 east of Main Street is included in the treatment area.

In 2007, a stormwater treatment manhole was installed at the southeast corner of Highway 1 and North Main Street. The manhole meets full-capture treatment requirements. This treatment manhole serves the portion of Subarea 4-A that is north of Highway 92. The device is maintained by the City.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

Subarea 4-A: This area is located north of Highway 92 and east of Highway 1, with another area south of Highway 92 and east of Main Street. The portion of Highway 92 east of Main Street is included in the treatment area.

In 2011, 13 storm inlet screens were installed utilizing San Francisco Estuary Project grant funds. There is some overlap in the areas treated by these screens and the larger treatment manhole installed in 2007. The devices are maintained by the City.

Subarea 4-B: This area is located along both sides of Main Street, encompassing most of the Downtown retail/ commercial district.

In 2011, 19 storm inlet screens were installed utilizing San Francisco Estuary Project grant funds. The devices are maintained by the City.

Subarea 4-C: This area includes two senior housing developments located east of Main Street at Arnold Way. In 2012, a stormwater treatment device was installed as required under the conditions of approval for the project (entitlements preceded the MRP December 2011 cutoff for non-LID measures). The devices are privately maintained.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No new control measures are proposed for Trash Management Area 4. Existing inspection and maintenance activities will continue.

Street Sweeping

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

The City's street sweeping includes sweeping most streets in residential areas once per month, the Downtown area one per week, and arterial streets once per week. . Parking prohibitions on street sweeping days does not currently exist, although sweeping occurs during off-peak retail hours when parking demands are lower, allowing better access to the curb. North Main Street from Highway 92 to Highway 1 and portions of Main Street north of Pilarcitos Creek are posted for no parking.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned. Enhanced street sweeping activities will not be implemented. Increasing street sweeping to greater than once per week in the Downtown and on arterial streets is not practical. While it would be possible to increase the frequency of street sweeping in residential areas, the low trash-generation rate for these streets would not result in an significant overall increase in collected trash. In addition, since by definition this Trash Management Area is already equipped with full-capture treatment devices, the benefits of increased street sweeping would be moot.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned. See above.

On-Land Trash Cleanups

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Pre-MRP on-land cleanup activities include removal of homeless encampments (as needed) and assistance to volunteer groups (Coastside Land Trust and Peninsula Open Space Trust) who perform annual cleanups of properties owned by these organizations.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

The City is working with the State of California Department of Fish and Wildlife (formerly Fish and Game) to obtain a multi-year programmatic permit for maintenance of open ditches, channels, and creeks. The City has completed an inventory and map of watercourses within the City (sorted by ownership, proposed maintenance frequency, etc.) and is completing the environmental (CEQA) document to obtain State DWW and Coastal Commission permits. An application to State DWW is in progress. The proposed maintenance activities will include trash pickup.

Enhanced homeless encampment cleanup has not been found to be necessary due homeless encampments not being a problem.

Actions Planned for Future Implementation Between July 2014 and July 2022.

See above

Activities to Reduce Trash from Uncovered Loads

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

No actions were in place prior to the MRP effective date.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

The City has included language in its solid waste franchise agreements to require haulers to cover loads when transporting trash or construction debris through the City.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

Anti-Littering and Illegal Dumping Enforcement Activities

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

The Municipal Code prohibits littering and dumping. The illegal dumping program includes response to complaints, identification of offenders (if possible), and cleanup of debris if the responsible party cannot be found.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

Improved Trash Bins/ Container Management

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Inspection of trash containers and bins was provided in conjunction with the business inspection program under the requirements of the prior Countywide permit; these measures were replaced with measures in conformance with Section C.4 of the MRP upon its' adoption.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

Inspection of trash containers and bins is provided in conjunction with the business inspection program as required under Section C.4 of the MRP.

New and redeveloped commercial and retail development will be required to provide covered and plumbed to sanitary sewer covered trash bin enclosures, in conformance with Section C.3 of the MRP.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

3.2.5 Trash Management Area #5

The areas included in Trash Management Area 5 are the Low Trash Generating Areas. Land uses include single family residential, isolated commercial areas (such as a pumpkin farm and nurseries on Highway 1), open space, and State Beaches.

Full-Capture Treatment Devices

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

No actions were in place prior to the MRP effective date.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

Street Sweeping

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

The City’s street sweeping includes sweeping most streets in residential areas once per month, the Downtown area one per week, and arterial streets once per week. Parking prohibitions on street sweeping days does not currently exist, although on-street parking is not generally in high demand in single-family residential neighborhoods, allowing better access to the curb.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned. Enhanced street sweeping activities will not be implemented. While it would be possible to increase the frequency of street sweeping in residential areas, the low trash-generation rate for these streets would not result in a significant overall increase in collected trash.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned. See above.

On-Land Trash Cleanups

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Pre-MRP on-land cleanup activities include removal of homeless encampments (as needed) and assistance to volunteer groups (Coastside Land Trust and Peninsula Open Space Trust) who perform annual cleanups of properties owned by these organizations.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

The City is working with the State of California Department of Fish and Wildlife (formerly Fish and Game) to obtain a multi-year programmatic permit for maintenance of open ditches, channels, and creeks. The City has completed an inventory and map of watercourses within the City (sorted by ownership, proposed maintenance frequency, etc.) and is completing the environmental (CEQA) document to obtain State DWW and Coastal Commission permits. An application to State DWW is in progress. The proposed maintenance activities will include trash pickup.

Enhanced homeless encampment cleanup has not been found to be necessary due homeless encampments not being a problem.

Actions Planned for Future Implementation Between July 2014 and July 2022.

See above

Activities to Reduce Trash from Uncovered Loads

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

No actions were in place prior to the MRP effective date.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

The City has included language in its solid waste franchise agreements to require haulers to cover loads when transporting trash or construction debris through the City.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

Anti-Littering and Illegal Dumping Enforcement Activities

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

The Municipal Code prohibits littering and dumping. The illegal dumping program includes response to complaints, identification of offenders (if possible), and cleanup of debris if the responsible party cannot be found.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

Improved Trash Bins/ Container Management

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Inspection of trash containers and bins was provided in conjunction with the business inspection program under the requirements of the prior Countywide permit; these measures were replaced with measures in conformance with Section C.4 of the MRP upon its' adoption.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

Inspection of trash containers and bins is provided in conjunction with the business inspection program as required under Section C.4 of the MRP.

New and redeveloped commercial and retail development will be required to provide covered and plumbed to sanitary sewer covered trash bin enclosures, in conformance with Section C.3 of the MRP.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

3.2.6 Jurisdiction-wide Control Measures

Single-Use Carryout Bag Policies

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

No actions were in place prior to the MRP effective date.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

The City adopted Ordinance C-2013-03 on March 5, 2011, adding Chapter 7.35, Sections 7.35.010 thru 7.35.040, to the City of Half Moon Bay Municipal Code. The new sections restrict the use of single-use, carry out bags; the sections conform to the single-use carryout bag policies adopted by other cities within San Mateo County. The ban went into effect on April 22, 2013.. Enforcement is provided by San Mateo County Division of Environmental Health under the MRP Section C.4 business inspections.

A full copy of the ordinance is attached as Appendix A.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

Polystyrene Foam Food Service Ware Policies

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

No actions were in place prior to the MRP effective date.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

The City adopted Ordinance C-6.11 on June 7, 2011, adding Chapter 7.30, Sections 7.30,010 and 7.30.020, to the City of Half Moon Bay Municipal Code. The new sections add by reference Chapter 4.107 of the San Mateo County Code, banning the use of polystyrene foam containers and authorizing enforcement by the County of San Mateo. The ban went into effect in August 2011. Enforcement is provided by San Mateo County Division of Environmental Health under the MRP Section C.4 business inspections.

A copy of the ordinance is attached as Appendix B.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned. See above.

Public Education and Outreach Programs

Actions Initiated Prior To and Continued After the MRP Effective Date (December 2009)

Continued Pre-MRP Actions: The City implemented the following public education and outreach control measures prior to the effective date of the MRP and has continued to implement these measures since MRP adoption.

SMCWPPP Public Information and Participation Program (Countywide)

Through participation and funding of the San Mateo Countywide Water Pollution Prevention Program's (SMCWPPP) Public Information and Participation program (PIP), the City plans to continue implementing litter reduction outreach to school-age children and youth. SMCWPPP currently oversees a contract to provide direct outreach to grades K-5 in a school setting on behalf of all permittees. The contract is currently held by the Banana Slug String Band, which performs a presentation called "We All Live Downstream." Through songs and interactive exercises, the message of not putting anything in the storm drains (including trash) is delivered, along with basic concepts of the water cycle and the impact of pollution on aquatic life. In addition, SMCWPPP has developed a presentation entitled "Water Pollution Prevention: Problems and Solutions" that is delivered to high school students. This presentation is dedicated to watershed and storm drain education, and the impact of litter on local creeks and waterways. Both efforts are managed to ensure that schools in each community in the County are reached. For communities without High Schools, the feeder schools in neighboring communities are specifically targeted for presentations. In addition to outreach at the school sites, a number of student activity guides and coloring books related to watershed health and littering are provided to children who attend outreach events. Schools are also directly targeted in promotion of Coastal Cleanup Day.

PIP also participates in a regional anti-littering campaign developed by BASMAA targeted at youth ages 14 to 24. As acting chair of the BASMAA PIP committee, SMCWPPP PIP has participated in the development and dissemination of campaign materials, and has conducted local events on behalf of all jurisdictions to promote the campaign. The campaign, entitled "Be The Street You Want to See", will soon transition from building a community of youth dedicated to not littering to engaging that community in action.

SMCWPPP, through its PIP program, plans to continue to conduct community outreach events on behalf of Permittees who request support. Outreach materials related to litter that are distributed include, in addition to the children's materials listed above under Outreach to School-age Children or Youth, a promotional sign for cigarette smokers to discourage cigarette litter, and pocket ashtrays are given out. A general stormwater pollution prevention flyer in English and Spanish that includes litter reduction in its messaging is distributed. In addition to table outreach events conducted for specific Permittees, PIP also conducts a Countywide Event aimed to reach residents from throughout the County. PIP manages an online calendar which promotes cleanup events by non-profit organizations throughout the County. In FY 2012, PIP completed its 7th year acting as the county coordinator for Coastal Cleanup Day, increasing volunteer participation by 400% in that time, and trash removal increased by 300%.

During the term of the MRP, new outreach materials have been disseminated to the public, including reusable shopping bags to encourage reduction in use of plastic carryout bags PIP has supported a countywide ban on carryout bags that began implementation on April 22, 2013. In addition, spring cleanups taking place in individual jurisdictions are promoted under one theme by PIP, entitled Spring Cleaning SMC. PIP assists in directing volunteers to cleanup events in their communities. SMCWPPP conducted a total of 11 outreach events on behalf of various jurisdictions within the County in the 2012-13 fiscal year. SMCWPPP will also continue maintaining an online

calendar of cleanups on a monthly basis. In addition to using the SMCWPPP website, flowstobay.org, to promote cleanups, PIP is actively involved in social media platforms such as Facebook, Twitter, You Tube, and Instagram to deliver anti-littering and cleanup messages.

Coastal Cleanup Day Promotion (Countywide)

On the countywide level, SMCWPPP also conducts annual press releases for Coastal Cleanup Day, and uses Twitter to promote cleanup events. These releases are intended to gain support and assistance for cleanup events conducted each September in local water bodies.

BASMAA Regional Media Relations Project (Regional)

Through participation and funding of the **BASMAA Regional Media Relations Project**, the City is continuing to implement a media relations project partially designed to reduce littering from target audiences in the Bay Area. The goal of the BASMAA Media Relations Project is to generate media coverage that encourages individuals to adopt behavior changes to prevent water pollution, including littering. At least two press releases or PSAs focus on litter issues each year (e.g., creek clean-up activities, preventing litter by using reusable containers, etc.). In FY 12-13, the Media Relations project developed a press release new and recent bag bans in cities around the region. The pitch included information on the litter caused by plastic bags. Information ran on KBAY, KCBS and on eight Bay Area Patch.com sites.

Actions Initiated After the MRP Effective Date and Implemented Prior to July 1, 2014

No further actions are planned.

Actions Planned for Future Implementation Between July 2014 and July 2022.

No further actions are planned.

3.2.7 Creek and Shoreline Hot Spot Cleanups

The City has a single Creek Hot Spot Cleanup site, as required under the MRP. The site is located on Pilarcitos Creek at Highway 1, adjacent to a public trail connecting the Downtown with Highway 1 and the beaches via the creek. Trash is from miscellaneous littering; dumping does not appear to be an issue. Trash types are primarily plastic bags, cigarette butts, paper and cardboard, Styrofoam, and miscellaneous plastic. Approximately 4 cubic yards of trash were removed at the last reported cleanup in September 2012, with an average of 5 cubic yards removed over the last three years.

The Hot Spot cleanup was initiated in 2009 in conformance with the MRP. No changes to the scope of work are proposed in future years.

3.2.8 Summary of Trash Control Measures

The control measures listed are believed to achieve the full trash reduction level in each management area.

An “X” denotes an existing measure as of 2009 or a new measure to be implemented. All measures will continue in future years if existing and/ or once implemented.

Trash Management Area 1

Control Measure	Pre-MRP (Before 2009)	2009-2014	2014-2022
Full-Capture Treatment Devices			X
Street Sweeping	X	-	-
On-Land Cleanups	X	X	-
Activities to Reduce Trash from Uncovered Loads		X	-
Anti-Littering and Illegal Dumping Enforcement Activities	X	-	-
Improved Trash Bin/ Container Management		X	-

Trash Management Area 2

Control Measure	Pre-MRP (Before 2009)	2009-2014	2014-2022
Full-Capture Treatment Devices			X
On-Land Cleanups	X	-	-

Trash Management Area 3

Control Measure	Pre-MRP (Before 2009)	2009-2014	2014-2022
Full-Capture Treatment Devices			?
On-Land Cleanups			?
Activities to Reduce Trash from Uncovered Loads		X	
Anti-Littering and Illegal Dumping Enforcement Activities	X		
Improved Trash Bin/ Container Management		X	
Further Study Needed			X

Trash Management Area 4

Control Measure	Pre-MRP (Before 2009)	2009-2014	2014-2022
Full-Capture Treatment Devices	X	X	
Street Sweeping	X	-	-
On-Land Cleanups	X	X	-
Activities to Reduce Trash from Uncovered Loads		X	-
Anti-Littering and Illegal Dumping Enforcement Activities	X	-	-
Improved Trash Bin/ Container Management		X	-

Trash Management Area 5

Control Measure	Pre-MRP (Before 2009)	2009-2014	2014-2022
Street Sweeping	X	-	-
On-Land Cleanups	X	X	-
Activities to Reduce Trash from Uncovered Loads		X	-
Anti-Littering and Illegal Dumping Enforcement Activities	X		-
Improved Trash Bin/ Container Management		X	-

3.3 Control Measure Implementation Schedule

Table 7. City of Half Moon Bay trash control measure implementation schedule.

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	FY 2014-2015	FY 2015-2016	FY 2016-2017 ^b	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 ^c
TMA #1														
Full-Capture Treatment Devices							X*	X	X	X	X	X	X	X
Street Sweeping	X	X	X	X	X	X	X	X	X	X	X	X	X	X
On-Land Cleanups	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activities to Reduce Trash from Uncovered Loads		X	X	X	X	X	X	X	X	X	X	X	X	X
Anti-Littering and Illegal Dumping Enforcement Activities	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Improved Trash Bin/ Container Management	X	X	X	X	X	X	X	X	X	X	X	X	X	x
TMA #2														
Full-Capture Treatment Devices							X	X	X	X	X	X	X	X
On-Land Cleanups	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TMA #3														
Full-Capture Treatment Devices							X**	X	X	X	X	X	X	X
On-Land Cleanups							X	X	X	X	X	X	X	X
Activities to Reduce Trash from Uncovered Loads														
Anti-Littering and Illegal Dumping Enforcement Activities	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Improved Trash Bin/ Container Management	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Further Study Needed							X	X	X	X	X	X	X	X
TMA #4														
Full-Capture Treatment Devices	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	FY 2014-2015	FY 2015-2016	FY 2016-2017 ^b	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 ^c
Street Sweeping	X	X	X	X	X	X	X	X	X	X	X	X	X	X
On-Land Cleanups	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activities to Reduce Trash from Uncovered Loads		X	X	X	X	X	X	X	X	X	X	X	X	X
Anti-Littering and Illegal Dumping Enforcement Activities	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Improved Trash Bin/ Container Management	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TMA #5														
Street Sweeping	X	X	X	X	X	X	X	X	X	X	X	X	X	X
On-Land Cleanups	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activities to Reduce Trash from Uncovered Loads		X	X	X	X	X	X	X	X	X	X	X	X	X
Anti-Littering and Illegal Dumping Enforcement Activities	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Improved Trash Bin/ Container Management	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Jurisdiction-wide Control Measures														
Single-Use Carryout Bag Ban					X	X	X	X	X	X	X	X	X	X
Polystyrene Foam Food Service Ware Ban				X	X	X	X	X	X	X	X	X	X	X
Public Education and Outreach	X		X	X	X	X	X	X	X	X	X	X	X	X
Creek and Shoreline Hot Spot Cleanups														
On-Land Cleanups	X	X	X	X	X	X	X	X	X	X	X	X	X	X

^aJuly 1, 2014 - 40% trash reduction target
^bJuly 1, 2017 - 70% trash reduction target
^cJuly 1, 2022 - 100% trash reduction target

*Installation of Full-Capture Treatment Devices in TMA#1 will begin in FY2014-15 and be completed in phases thru FY21-22.

**Installation of Full-Capture Treatment Devices in TMA#3 is dependent on further study and determination that full-capture treatment is appropriate and can be implemented in conjunction with private property owners.

4.0 PROGRESS ASSESSMENT STRATEGY

Provision C.10.a.ii of the MRP requires Permittees to develop and implement a trash load reduction tracking method that will be used to account for trash load reduction actions and to demonstrate progress and attainment of trash load reduction targets. Early into the MRP, Permittees decided to work collaboratively to develop a trash load reduction tracking method through the Bay Area Stormwater Management Agencies Association (BASMAA). Permittees, Water Board staff and other stakeholders assisted in developing Version 1.0 of the tracking method. On behalf of all MRP Permittees, the Bay Area Stormwater Management Agencies Association (BASMAA) submitted Version 1.0 to the Water Board on February 1, 2012.

The Trash Assessment Strategy (Strategy) described in this section is intended to serve as Version 2.0 of the trash tracking method and replace version 1.0 previously submitted to the Water Board. The Strategy is specific to Permittees participating in the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), including the City of Half Moon Bay. The City/County intends to implement the Strategy in phases and at multiple geographical scales (i.e., jurisdiction-wide and trash management area) in collaboration with SMCWPPP. Pilot implementation is scheduled for the near-term and as assessment methods are tested and refined, the Strategy will be adapted into a longer-term approach. The Strategy selected by the City is described in the following sections.

4.1 SMCWPPP Pilot Assessment Strategy

The following SMCWPPP Pilot Trash Assessment Strategy (SMCWPPP Pilot Strategy) was developed by SMCWPPP on behalf of the City and other San Mateo County Permittees. The SMCWPPP Pilot Strategy will be implemented at a pilot scale on a countywide basis and includes measurements and observations in the City of Half Moon Bay.

4.1.1 Management Questions

The SMCWPPP Pilot Strategy is intended to answer the following core management questions over time as trash control measures outlined in section 3.0 are implemented and refined:

Are the MS4 trash load reduction targets being achieved?

Have trash problems in receiving waters been resolved?

If trash problems in receiving waters exist, what are the important sources and transport pathways?

The SMCWPPP Pilot Strategy, including indicators and methods, is summarized in this section and fully described in the SMCWPPP Pilot Trash Assessment Strategy, a compendium document submitted to the Water Board on February 1, 2014 on behalf of all SMCWPPP Permittees (SMCWPPP 2014).

4.1.2 Indicators of Progress and Success

The management questions listed in the previous section will be addressed by tracking information and collecting data needed to report on a set of key environmental indicators. Environmental indicators are simple measures that communicate what is happening in the environment. Since trash in the environment is very complex, indicators provide a more practical and economical way to track the state of the environment than if we attempted to record every possible variable.

With regard to municipal stormwater trash management, indicators are intended to detect progress towards trash load reduction targets and solving trash problems. Ideally, indicators should be robust and able to detect progress that is attributable to multiple types of trash control measure implementation scenarios. Assessment results should also provide Permittees with an adequate level of confidence that trash load reductions from MS4s have occurred, while also assessing whether trash problems in receiving waters have been resolved. Indicators must also be cost effective, relatively easy to generate, and understandable to stakeholders.

Primary and secondary indicators that SMCWPPP Permittees will use to answer core management questions include:

Primary Indicators:

- 1-A Reduction in the level of trash present on-land and available to MS4s
- 1-B Effective full capture device operation and maintenance

Secondary Indicators:

- 2-A Successful levels of trash control measures implementation
- 2-B Reductions in the amount of trash in receiving waters

In selecting the indicators above, the City of Half Moon Bay in collaboration with SMCWPPP and other SMCWPPP Permittees recognize that no one environmental indicator will provide the information necessary to effectively determine progress made in reducing trash discharged from MS4s and improvements in the level of trash in receiving waters. Multiple indicators were therefore selected.

The ultimate goal of municipal stormwater trash reduction strategies is to reduce the impacts of trash associated with MS4s on receiving waters. Indicators selected to assess progress towards this goal should ideally measure outcomes (e.g., reductions in trash discharged). The primary indicators selected by SMCWPPP are outcome-based and include those that are directly related to MS4 discharges. Secondary indicators are outcome or output-based and are intended to provide additional perspective on and evidence of, successful trash control measure implementation and improvements in receiving water condition with regard to trash.

As described in Section 2.2, trash is transported to receiving waters from pathways other than MS4s, which may confound our ability to observe MS4-associated reductions in creeks and shorelines. Due to this challenge of linking MS4 control measure implementation to receiving water conditions, the receiving water based indicator is currently considered a secondary indicator. Evaluations of data on the amount of trash in receiving waters that are conducted over time through the Pilot Assessment Strategy will assist the City in further determinations of the important sources and pathways causing problems in local creeks, rivers and shorelines.

4.1.3 Pilot Assessment Methods

This section briefly summarizes the preliminary assessment methods that the City of Half Moon Bay will implement through the SMCWPPP Pilot Strategy to generate indicator information described in the previous section. Additional information on each method can be found in the SMCWPPP Pilot Trash Assessment Strategy submitted to the Water Board by SMCWPPP on behalf of the City.

1-A. On-land Visual Assessments

As part of the Trash Generation Map assessment and refinement process (see Section 2.3.1), a draft on-land visual assessment method was developed to assist Permittees in confirming and refining trash generating area designations (i.e., very high, high, moderate and low trash generating categories). The draft on-land visual assessment method is intended to be a cost-effective tool and provide Permittees with a viable alternative to quantifying the level of trash discharged from MS4s. As part of BASMAA’s *Tracking California’s Trash* grant received from the State Water Resources Control Board (see Section 4.2), quantitative relationships between trash loading from MS4s and on-land visual assessment condition categories will be established. Condition categories defined in the draft on-land assessment protocol are listed in Table 8

Table 8. Trash condition categories used in the draft on-land visual assessment protocol.

Trash Condition Category	Summary Definition
A (Low)	Effectively no trash is observed in the assessment area.
B (Moderate)	Predominantly free of trash except for a few pieces that are easily observed.
C (High)	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets.
D (Very High)	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area.

On-land visual assessments will be conducted in trash management areas within the City of Half Moon Bay as part of the SMCWPPP Pilot Trash Assessment Strategy. On-land assessments are intended to establish initial conditions and detect improvements in the level of trash available to MS4s over time. More specifically, on-land visual assessment methods will be conducted in areas not treated by trash full capture devices in an attempt to evaluate reductions associated with other types of control measures. Assessment methods for areas treated by full capture devices are described in this next section.

Given that the on-land assessment method and associated protocol have not been fully tested and refined, initial assessments will occur at a pilot scale in the City and in parallel to the *Tracking California’s Trash* project. The frequency of assessments and number of sites where assessments will occur during the pilot stage are more fully described in the SMCWPPP Pilot Trash Assessment Strategy (SMCWPPP 2014).

1-B. Full Capture Operation and Maintenance Verification

Consistent with the MRP, adequate inspection and maintenance of trash full capture devices is required to maintain full capture designation by the Water Board. The City of Half

Moon Bay is currently developing an operation and maintenance verification program (Trash O&M Verification Program), via SMCWPPP, to ensure that devices are inspected and maintained at a level that maintains this designation.

The SMCWPPP Trash O&M Verification Program will be modeled on the current O&M verification program for stormwater treatment controls implemented consistent with the Permit new and redevelopment requirements. Additional details regarding the Trash O&M Verification Program can be found in the SMCWPPP Pilot Trash Assessment Strategy (SMCWPPP 2014).

2-A. Control Measure Effectiveness Evaluations

In addition to on-land trash assessments and full capture operation and maintenance verification, the City will also conduct assessments of trash control measures implemented within their jurisdictional area. Assessment methods will be selected based on trash sources and the type of control measure being implemented. Control measure effectiveness evaluations are more fully described in the SMCWPPP Pilot Trash Assessment Strategy. The following are example assessment methods that may be used to demonstrate successful control measure implementation and progress towards trash reduction targets:

Product-related Ordinances – Annually tracking and reporting the % of businesses in compliance with the ordinance and the percentage requiring a response.

Street Sweeping – Reporting the frequency of sweeping and ability to sweep to the curb in specific areas where enhanced sweeping is implemented; and/or documenting the level of trash on streets directly after street sweeping during wet and dry weather seasons.

Public/Private Trash Container Management – Reporting the magnitude and extent of enhanced actions; and/or visually assessing and documenting conditions around public trash containers before and after implementing enhanced control measures.

Targeted Outreach and Enforcement – Reporting the magnitude and extent of enhanced actions; tracking and reporting the % increase in enforcement actions; and/or visually assessing and documenting the conditions in targeted areas before and after implementing control measures.

Public Outreach Campaigns – Reporting the magnitude and extent of enhanced actions, and/or conducting pre and post campaign surveys.

On-land Cleanups and Enforcement – Reporting the magnitude and extent of enhanced actions; visually assessing and documenting the conditions in targeted areas before and after control measure implementation; and/or tracking the volumes of trash removed.

Illegal Dumping Prevention – Reporting the magnitude and extent of enhanced actions; and/or tracking and reporting improvements in the number of incidents.

Business Improvement Districts – Reporting the magnitude and extent of enhanced actions; and/or visually assessing and documenting the conditions in BID areas before and after implementing control measures.

Prevention of Uncovered Loads - Reporting the magnitude and extent of enhanced actions; tracking and reporting the decreases in the number of incidents; and/or visually assessing and documenting the conditions in targeted areas before and after implementing control measures.

Partial Capture Devices – Reporting the magnitude and extent of enhanced actions; and/or visually assessing and the amount of trash in storm drains or downstream of partial capture devices.

2-C. Receiving Water Condition Assessments

The ultimate goal of stormwater trash management in the Bay Area is to significantly reduce the amount of trash found in receiving waters. In the last decade, San Mateo County Permittees and volunteers have collected data on the amounts of trash removed during cleanup events. More recently, Permittees have conducted trash assessments in creek and shoreline hotspots using standardized assessment methods. In an effort to answer the core management question *Have trash problems in receiving waters been resolved?*, the City of Half Moon Bay plans to continue conducting receiving water condition assessments at trash hot spots a minimum of one time per year. Assessment will be conducted consistent with Permit hot spot cleanup and assessment requirements. Additional information on receiving water assessment methods can be found in the SMCWPPP Pilot Trash Assessment Strategy (SMCWPPP 2014).

4.2 BASMAA “Tracking California’s Trash” Project

The SMCWPPP Pilot Assessment Strategy described in the previous section recognizes that outcome-based trash assessment methods needed to assess progress toward trash reduction targets are not well established by the scientific community. In an effort to address these information gaps associated with trash assessment methods, the Bay Area Stormwater Management Agencies Association (BASMAA), in collaboration with SMCWPPP, the 5 Gyres Institute, San Francisco Estuary Partnership, the City of Los Angeles, and other stormwater programs in the Bay Area, developed the *Tracking California’s Trash* Project. The Project is funded through a Proposition 84 grant awarded to BASMAA by the State Water Resources Control Board (SWRCB) who recognized the need for standardized trash assessment methods that are robust and cost-effective.

The Project is intended to assist BASMAA member agencies in testing trash assessment and monitoring methods needed to evaluate trash levels in receiving waters, establish control measures that have an equivalent performance to trash full capture devices, and assess progress in trash reduction over time. The following sections provide brief descriptions of tasks that BASMAA will conduct via the three-year Project. Full descriptions of project scopes, deliverables, and outcomes will be developed as part of the task-specific Sampling and Analysis Plans required by the SWRCB during the beginning of the Project. The Project is currently underway and will continue through 2016.

4.2.1 Testing of Trash Monitoring Methods

BASMAA and the 5 Gyres Institute will evaluate the following two types of assessment methods as part of the Project:

Trash Flux Monitoring – Trash flux monitoring is intended quantify the amount of trash flowing in receiving waters under varying hydrological conditions. Flux monitoring will be tested in up to four receiving water bodies in San Francisco Bay and/or the Los Angeles areas. Methods selected for evaluation and monitoring will be based on a literature review conducted during this task and through input from technical advisors and stakeholders. Monitoring is scheduled to begin in 2014 and will be completed in 2016.

On-land Visual Assessments – As part of the Project, BASMAA will also conduct an evaluation of on-land visual assessment methods that are included in the SMCWPPP Pilot Assessment Strategy. The methods are designed to determine the level of trash on streets and public right-of-ways that may be transported to receiving waters via MS4s. BASMAA plans to conduct field work associated with the evaluation of on-land visual assessment at a number of sites throughout the region. To the extent practical, sites where the on-land methods evaluations take place will be coordinated with trash flux monitoring in receiving waters. On-land assessments will occur in areas that drain to trash full capture devices, and all sites will be assessed during wet and dry weather seasons in order to evaluate on-land methods during varying hydrologic conditions. Monitoring is scheduled to begin in 2014 and will be completed in 2016.

4.2.2 Full Capture Equivalent Studies

Through the implementation of BASMAA's *Tracking California's Trash* grant-funded project, a small set of "Full Capture Equivalent" projects will also be conducted in an attempt to demonstrate that specific combinations of control measures will reduce trash to a level equivalent to full capture devices. Initial BMP combinations include high-frequency street sweeping, and enhanced street sweeping with auto-retractable curb inlet screens. Other combinations will also be considered. Studies are scheduled to begin in 2014 and will be completed in 2016.

4.3 Long-Term Assessment Strategy

The City of Half Moon Bay is committed to implementing standardized assessment methods post-2016 based on the lessons learned from pilot assessments and studies that will occur between 2014 and 2016. Assessment activities described in the previous sections will evaluate the utility of different assessment methods to demonstrate progress towards trash reduction targets and provide recommended approaches for long-term implementation. Lessons learned will be submitted to the Water Board with the FY 2015-2016 Annual Report and a revised Strategy will be developed and submitted, if necessary. The revised Strategy will include agreed upon assessment methods that will be used to demonstrate progress during the remaining term of trash reduction requirements. Reporting using the new/revised methods will begin with the FY 2016-17 Annual Report.

4.4 Implementation Schedule

The implementation schedule for the SMCWPPP Pilot Implementation Strategy, BASMAA's *Tracking California's Trash* project, and the Long-Term Assessment Strategy are included in Table 9. Load reduction reporting milestones are also denoted in the table. The schedule is consistent with the need for near-term pilot assessment results to demonstrate progress toward short-term targets,

while acknowledging the need for testing and evaluation of assessment methods and protocols prior to long-term implementation. For more detailed information on implementation timelines, refer to the SMCWPPP Pilot Trash Assessment Strategy (SMCWPPP 2014) and monitoring plans developed as part of BASMAA’s Tracking California’s Trash project.

Table 9. City of Half Moon Bay trash progress assessment implementation schedule.

Trash Assessment Programs and Methods	Prior to FY 2013-14	Fiscal Year								
		2013-14 ^a	2014-15	2015-16	2016-17 ^b	2017-18	2018-19	2019-20	2020-21	2021-22 ^c
Pilot Trash Assessment Strategy (SMCWPPP)										
On-land Visual Assessments										
Initial (Baseline) Assessments	X									
Pilot Progress Assessments		X	X	X	X					
Full Capture Operation and Maintenance Verification			X	X	X					
Control Measure Effectiveness Evaluations	X	X	X	X	X					
Receiving Water Condition Assessments	X	X	X	X	X					
Tracking California’s Trash Project (BASMAA)										
Testing of Trash Monitoring Methods										
Trash Flux Monitoring Protocol Testing			X	X	X					
On-land Visual Assessment Evaluations			X	X	X					
Full Capture Equivalent Studies			X	X	X					
Long-Term Trash Assessment Strategy (SMCWPPP)						X	X	X	X	X

^aJuly 1, 2014 - 40% trash reduction target

^bJuly 1, 2017 - 70% trash reduction target

^cJuly 1, 2022 - 100% trash reduction target

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APPENDIX A

ORDINANCE NO. C-2013-03

AN ORDINANCE OF THE CITY COUNCIL OF
THE CITY OF HALF MOON BAY ADDING CHAPTER 7.35
"REUSABLE BAGS" OF TITLE 7 "HEALTH AND WELFARE"
OF THE HALF MOON BAY MUNICIPAL CODE

THE CITY COUNCIL OF THE CITY OF HALF MOON BAY DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. Chapter 7.35 "Reusable Bags" is hereby added as follows:

SEC. 7.35.010. Findings and purpose.

The city council finds and determines that:

- a. The use of single-use, carry-out bags by consumers at retail establishments is detrimental to the environment, public health, and welfare.
- b. The manufacture and distribution of single-use, carry-out bags requires utilization of natural resources and results in the generation of greenhouse gas emissions.
- c. Single-use, carry-out bags contribute to environmental problems, including litter in storm drains, creeks, the bay, and the ocean.
- d. Single-use, carry-out bags provided by retail establishments impose unseen costs on consumers, local governments, the state, and taxpayers, and constitute a public nuisance.

The city council of Half Moon Bay does, accordingly, find and declare that it should restrict the use of single-use, carry-out bags.

The city has a substantial interest in protecting its residents and the environment from negative impacts from plastic carry-out bags.

SEC. 7.35.020. Definitions.

- a. "Customer" means any person obtaining goods from a retail establishment.
- b. "Garment bag" means a travel bag made of pliable, durable material with or without a handle, designed to hang straight or fold double and used to carry suits, dresses, coats, or the like without crushing or wrinkling the same.
- c. "Nonprofit charitable reuser" means a charitable organization, as defined in Sec. 501(c)(3) of the Internal Revenue Code of 1986, or a distinct operating unit or division of the charitable organization, that reuses and recycles donated goods or materials and receives more

than fifty percent (50%) of its revenues from the handling and sale of those donated goods or materials.

d. "Person" means any natural person, firm, corporation, partnership, or other organization or group however organized.

e. "Prepared food" means foods or beverages which are prepared on the premises by cooking, chopping, slicing, mixing, freezing, or squeezing, and which require no further preparation to be consumed. "Prepared food" does not include any raw, uncooked meat product, or fruits or vegetables which are chopped, squeezed, or mixed.

f. "Public eating establishment" means a restaurant, take-out food establishment, or any other business that receives ninety percent (90%) or more of its revenue from the sale of prepared food to be eaten on or off its premises.

g. "Recycled paper bag" means a paper bag provided at the check stand, cash register, point-of-sale, or other point of departure for the purpose of transporting food or merchandise out of the establishment that contains no old-growth fiber and a minimum of forty percent (40%) postconsumer recycled content; is one hundred percent (100%) recyclable; and has printed in a highly visible manner on the outside of the bag the words "Reusable" and "Recyclable," the name and location of the manufacturer, and the percentage of postconsumer recycled content.

h. "Retail establishment" means any commercial establishment that sells perishable or nonperishable goods, including, but not limited to, clothing, food, and personal items directly to the customer; and is located within or doing business within the geographical limits of the City of Half Moon Bay. "Retail establishment" does not include public eating establishments or nonprofit charitable reusers.

i. "Reusable bag" means either a bag made of cloth or other machine-washable fabric that has handles, or a durable plastic bag with handles that is at least 2.25 mil thick and is specifically designed and manufactured for multiple reuse. A garment bag may meet the above criteria regardless of whether it has handles or not.

j. "Single-use, carry-out bag" means a bag other than a reusable bag provided at the check stand, cash register, point-of-sale, or other point of departure, including departments within a store, for the purpose of transporting food or merchandise out of the establishment. "Single-use, carry-out bags" do not include bags without handles provided to the customer: (1) to transport prepared food, produce, bulk food, or meat from a department within a store to the point-of-sale; (2) to hold prescription medication dispensed from a pharmacy; or (3) to segregate food or merchandise that could damage or contaminate other food or

merchandise when placed together in a reusable bag or recycled paper bag.

SEC. 7.35.030. Single-use, carry-out bag.

a. No retail establishment shall provide a single-use, carry-out bag to a customer at the check stand, cash register, point-of-sale, or other point of departure for the purpose of transporting food or merchandise out of the establishment, except as provided in this section.

b. On or before December 31, 2014, a retail establishment may only make recycled paper bags or reusable bags available to customers if the retailer charges a minimum of ten cents (\$0.10) per bag.

c. On or after January 1, 2015, a retail establishment may only make recycled paper bags or reusable bags available to customers if the retailer charges a minimum of twenty-five cents (\$0.25) per bag.

d. Notwithstanding this section, no retail establishment may make available for sale a recycled paper bag or a reusable bag unless the amount of the sale of such bag is separately itemized on the sale receipt.

e. A retail establishment may provide one (1) or more recycled paper bags at no cost to any of the following individuals: a customer participating in the California Special Supplement Food Program for Women, Infants, and Children pursuant to Article 2 (commencing with Sec. 123275) of Chapter 1 of Part 2 of Division 106 of the Health and Safety Code; a customer participating in the Supplemental Food Program pursuant to Chapter 10 (commencing with Sec. 15500) of Part 3 of Division 9 of the California Welfare and Institutions Code; and a customer participating in CalFresh pursuant to Chapter 10 (commencing with Sec. 18900) of Part 6 of Division 9 of the California Welfare and Institutions Code.

SEC. 7.35.040. Recordkeeping and inspection.

Every retail establishment shall keep complete and accurate records or documents of the purchase and sale of any recycled paper bag or reusable bag by the retail establishment for a minimum period of three (3) years from the date of purchase and sale, which record shall be available for inspection at no cost to the city during regular business hours by any city employee authorized to enforce this part. Unless an alternative location or method of review is mutually agreed upon, the records or documents shall be available at the retail establishment address. The provision of false information, including incomplete records or documents to the city, shall be a violation of this Chapter."

SECTION 2. SEVERABILITY. If any provision of this ordinance is declared invalid by a court of competent jurisdiction, it is the intent of the City Council that such invalid provision be severed from the remaining provisions of the ordinance.

SECTION 3. CEQA REVIEW. On October 23, 2012, the County of San Mateo County adopted a Program Environmental Impact Report (“EIR”) that analyzed the impacts of this reusable bag ordinance if adopted in cities throughout the County of San Mateo as well as neighboring jurisdictions. The EIR was adopted pursuant to the California Environmental Quality Act, Public Resources Code section 21000 *et seq.* (“CEQA”) and the CEQA Guidelines, California Code of Regulations, Title 14, Section 15000 *et seq.* It is incorporated by reference herein.

Pursuant to Section 15096 of the CEQA Guidelines, the City of Half Moon Bay acts as a responsible agency for adoption of this ordinance within the City of Half Moon Bay. Upon independent review of the EIR and all the evidence before it, the City Council makes the following findings:

- 1) The Final Program Environmental Impact Report is complete, correct, adequate, and prepared in accordance with CEQA, CEQA Guidelines, and the public comment period; and
- 2) On the basis of the Initial Study, Notice of Preparation, Final Program Environmental Impact Report, and public comment received by both the County of San Mateo and the City of Half Moon Bay, there is no substantial evidence that the project as proposed will have a significant effect on the environment; and
- 3) Adoption of this ordinance and analysis of the EIR reflects the independent judgment of the City Council of the City of Half Moon Bay; and
- 4) A Notice of Determination shall be filed pursuant to CEQA Guidelines sections 15094 and 15096.

SECTION 4. PUBLICATION. The City Clerk of the City of Half Moon Bay is hereby directed to publish this Ordinance, or the title hereof as a summary, pursuant to Government Code Section 36933, once within fifteen (15) days after its passage in the Half Moon Bay Review, a newspaper of general circulation published in the City of Half Moon Bay.

SECTION 5. EFFECTIVE DATE. This Ordinance shall be effective April 22nd 2013.

INTRODUCED at a regular meeting of the City Council of the City of Half Moon Bay, California, held on the 19th day of February, 2013.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Half Moon Bay, California, held on the 5th day of March, 2013, by the following vote:

Ayes, Councilmembers:

Noes, Councilmembers:

Absent, Councilmembers:

Abstain, Councilmembers:

Attest:

Siobhan Smith, City Clerk

Rick Kowalczyk, Mayor

APPENDIX B

ORDINANCE NO. C-06-11

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF HALF MOON BAY
ADDING CHAPTER 7.30 "POLYSTYRENE BASED DISPOSABLE FOOD SERVICE
WARE PROHIBITED" TO THE CITY OF HALF MOON BAY MUNICIPAL CODE**

RECITALS

WHEREAS, the County of San Mateo has adopted an ordinance prohibiting food vendors from using polystyrene based disposable food service ware; and

WHEREAS, this Council finds that polystyrene is a petroleum-based, lightweight plastic material commonly used as food service ware by retail food vendors operating in the City of Half Moon Bay. Polystyrene, often referred to by the trademark Styrofoam, has also become a problematic environmental pollutant given its non-biodegradable, and nearly non-reusable nature; and

WHEREAS, this Council finds that polystyrene-based, single-use food service ware constitutes a substantial portion of the litter within the City of Half Moon Bay; and

WHEREAS, this Council finds that effective ways to reduce the negative environmental impacts of disposable food service ware include reusing or recycling food service ware and using compostable materials made from renewable resources such as paper, cardboard, corn starch, potato starch, and/or sugarcane; and

WHEREAS, this Council does, accordingly, find and declare that it should restrict the use by food vendors of polystyrene-based disposable food service ware.

NOW, THEREFORE, the City Council of the City of Half Moon Bay ordains as follows:

SECTION 1. Chapter 7.30 "POLYSTYRENE BASED DISPOSABLE FOOD SERVICE WARE PROHIBITED" is added to City of Half Moon Bay Municipal Code to read as follows:

"Chapter 7.30

POLYSTYRENE BASED DISPOSABLE FOOD SERVICE WARE PROHIBITED

Section 7.30.010 Adoption of San Mateo County Code Chapter 4.107 by Reference.

Chapter 4.107 "Prohibition on the Use of Polystyrene Based Disposable Food Service Ware by Food Vendors" of Title 4 of the San Mateo County ordinance code, and any amendments thereto, are hereby adopted and made effective in this city. Certified copies of Chapter 4.107 of Title 4, as adopted hereby, have been deposited with the City Clerk, and shall be at all times maintained by the Clerk for use and examination by the public.

Section 7.30.020 Authorization of Enforcement By San Mateo County Personnel.

The County of San Mateo, its officers, employees and agents are hereby authorized to enforce, on behalf of the city, Chapter 4.107 "Prohibition on the Use of Polystyrene Based Disposable Food Service Ware by Food Vendors" of Title 4 of the San Mateo

Ordinance No. C-06-11: 2011 Polystyrene Food Service Ware Prohibited
Page 2 of 2

County ordinance code, and any amendments thereto, within the jurisdiction areas of this city. Such enforcement authority includes, but is not limited to, the collection of fees and fines, expending such revenue in the enforcement of the prohibition on the use of polystyrene based disposable food service ware by food vendors, holding hearings, suspending permits and issuing administrative fines.

SECTION 2. Severability. If any section, sentence, clause or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by a decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have passed this Ordinance and adopted this Ordinance and each section, sentence, clause or phrase thereof, irrespective of the fact that any one or more section, subsections, sentences, clauses or phrases be declared invalid or unconstitutional.

SECTION 3. Publication. The City Clerk of the City of Half Moon Bay is hereby directed to publish this Ordinance, or the title hereof as a summary, pursuant to Government Code Section 36933, once within fifteen (15) days after its passage in the Half Moon Bay Review, a newspaper of general circulation published in the City of Half Moon Bay.

SECTION 4. Effective date. This Ordinance shall take effect and be in force on the first day of August, 2011.

INTRODUCED at a regular meeting of the City Council of the City of Half Moon Bay, California, held on the 17th day of May, 2011.

ADOPTED at a regular meeting of the City Council of the City of Half Moon Bay, California, held on the 7th day of June, 2011, by the following vote:

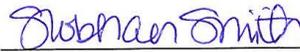
AYES, Councilmembers: Alifano, Fraser, Kowalczyk, Muller & Mayor Patridge

NOES, Councilmembers: _____

ABSENT, Councilmembers: _____

ABSTAIN, Councilmembers: _____

ATTEST:



Siobhan Smith, City Clerk



Naomi Patridge, Mayor